

MOON OF DOUBLE TROUBLE *by* A. R. Steber

VOLUME 19
NUMBER 1

See
BACK
COVER

a AMAZING STORIES

MARCH

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IN CANADA 30¢

AMAZING STORIES

SENSATIONAL
"RACIAL MEMORY"
STORY...

I REMEMBER LEMURIA

RICHARD
S. SHAVER



MARCH
1945

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All STORIES Complete

- "I REMEMBER LEMURIA!"**
(Short Novel—36,100) By Richard S. Shaver 12
Illustrated by Robert Fuqua
The curse of an aging sea brought death and madness to Mui; and the Atlans and Titans fled into space.
- THE MARTIAN'S MASTERPIECE**
(Short—4,000) By Sgt. Morris J. Steele 72
Illustrated by Virgil Finley
The artist on Mars secured his model from another planet—and that planet happened to be the Earth!
- MOON OF DOUBLE TROUBLE**
(Novelet—11,000) By A. R. Steber 82
Illustrated by Malcolm Smith
If one of the babblings of a madman turns out to be true, does that mean all the rest must be so?
- IS THIS THE NIGHT?** (Short—1,500) By Alexander Blade 102
Illustrated by Brady
The old man had made his prediction before, and he had made a mistake in timing. Was he right now?
- COMET FROM YESTERDAY**
(Novelet—15,000) By Lee Francis 106
Illustrated by J. Allen St. John
Here was a comet in reverse order; it was born in a volcano and was destined for the depths of space.
- THE LYING LIE DETECTOR**
(Novelet—10,000) By Leroy Yerxa 132
Illustrated by Robert Fuqua
What chance is there for justice when the mechanical lie detector develops an evil soul of its own?
- VALLEY OF DELIRIUM** (Novelet—15,000) By Richard Casey 150
Illustrated by Ned Hadley and L. Raymond Jones
Certainly here was a valley where only madmen should go! There wasn't a sane thing anywhere in it.
- TWIRL MY TURBINE, MAN ALIVE!**
(Short—1,120) By Omar Geor 180
Illustrated by Julian S. Krupa
There were a few basic laws of physics governing this giant dynamo—and it became something else ...
- DR. MACDONOUGH'S ENCEPHALOSEMANTICOMMUNICATOR**
(Short—2,950) By Leo A. Schmidt 188
Illustrated by Julian S. Krupa
There was only one thing wrong with MacDonough's radio: it was "Isbac"—tuned up beyond all control!

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Front cover painting by Robert Gibson Jones illustrating a scene from "I Remember Lemuria?"

Back cover painting by Frank R. Paul illustrating "Stories of the Stars"

AMAZING
REVIEWS
MARCH 11
1945

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Volume 19
Number 1

The

OBSERVATORY

..... by the Editor

HUGO GERNSBACH, known today as the "father of science fiction," launched the magazine you are now reading way back in 1926, nineteen years ago. He had conceived of a magazine dedicated to fiction based on science, and containing stories of what that science might lead to in the future. He told stories of tomorrow, of rocket trips to other planets, of strange new inventions and their effects upon civilization, of other dimensions, of time travel, of evolution. His new magazine was the magazine of the future.

BUT now, on the threshold of 1945, we have finally realized that the future has caught up with us. Today rockets are no fantasy of the mind; the super civilizations dreamed of in the past are with us. Travel to the planets has not been accomplished, but already pulp magazines carry advertisements of rocket societies. Many groups have plans for ships that are to be built in the more-or-less near future. The way is open, they say; only the work remains to be done. The other worlds of space are awaiting the exploring feet of Man. It has become increasingly evident that Hugo Gernsback's magazine is becoming the magazine of today, is being outstripped in its fiction by fact.

PRIMARILY, the concept of *Amazing Stories* was that of a stimulus to imagination, a seeking out of unknown mysteries that may some day become fact, and perhaps all the sooner because of the mental pioneering of its authors. It is this concept that all of us want to retain. Therefore, it becomes evident that something new must be added.

FOR several years we have been wondering as much as you what that new evolution in science fiction would be. Now, with this issue, we believe we have the answer. Stories of the future, we have always maintained, were true in the sense that they were based on fact. Our authors merely pointed to the logical ultimate development of some fact that already existed. That type of science fiction will always be with us. However, we have upon occasion run stories of the past. For instance, cave-man stories, or stories of Cleopatra, or of what might have happened if Napo-

leon had had just one tank. Authors have taken fact and woven fantasy into it—in other words, a turnabout of the methods used in stories of the future.

BEGINNING with this issue we are introducing something new in stories of the past. We are taking the strange things that have always made Man wonder, those weird things that happen to him which he cannot understand, yet which disturb him greatly, and are projecting them into a field of logic in an effort to arrive at truth by beginning with what is accepted as fantasy. Science has placed its stamp of recognition on one of the weird things in the mind of Man, that faculty known as "racial memory." Such a thing does exist, science says—without being able to explain just what it is. You know many instances of the feeling that "this place is familiar, yet I have never been here before!" or "I know a thing is so, yet I have never learned it!" In this issue we present a story (?) called "I Remember Lemuria!" by Richard S. Shaver. This is the first of the stories of the past, based on actual racial memory. We have begun to tap one of the most mysterious corners of Man's mind, and with truly amazing results, as you will discover when you read this first story. *Something new in science fiction is here!*

BUT before we tell you more about this story and its background, let's discuss a few points about the other stories in this issue, and get a few news items off our desk. First, the stories:

SOME years back a writer named A. R. Stcher ran a story called "Black World." It was very well received, and for a long time demands for more from this writer were insistent. Then your editor's face became very red with the revelation that the "author" was really the editor. He'd been unable to resist the urge to write a story of his own, and had palmed it off under a penname, not expecting it to bounce up in his face. After the truth was out, readers had a good chuckle, but they continued to ask for more. Frankly, an editor of four pulp magazines has little time for writing. Well, a year ago we began a little short story, and at long last it is finished. We have

(Continued on page 8)

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The OBSERVATORY

by the Editor

(Continued from page 6)

donated it to this issue, and we hope you like it. It's called "Moon of Double Trouble" and is straight interplanetary adventure. At the very least it should forever quiet your demands for more Steber—for which we will be thankful. Running along with the Shaver story, and others in this issue, it should run a very laggard last. Which is our way of committing literary suicide. Call it our "bowing out" appearance. And to you readers who have written all those nice letters about "Black World," thanks a million. It makes your editor feel like one of the gang!

FROM the African war theater comes a little short called "The Martian's Masterpiece," written by Sgt. Morris J. Strele. We think you'll like it. But a more amazing story came along with it. Morris has a brother in the air force, and one day in Italy a voice said "Your mother should see you now!" and there stood brother Bill! It's a small world! Morris didn't tell us what he was doing that "mother should see," but knowing Morris as we do, we have a few ideas!

WHEN an engineer writes a story, it ought to be about something akin to a turbine—and that's exactly what "Twirl My Turbine, Man Alive!" is. Omar Geer, the author, sent it in cold, and it struck us hot. We think you'll find this little gem a very unusual "gag" story. It has a bit of very gentle satirical humor in it.

ONCE in a while something different comes in. Our "different" item this issue is an article. It's "The First 100 Years You Get Nowhere," written by Constance R. Dowd, and don't say a lady can't be clever! This article is, and it'll have you rolling on the floor! It's funny.

NOT so long ago a volcano was born in Mexico, and an idea was born in Lee Francis' mind. The result is "Comet From Yesterday," which will hit you as a corking good science fiction story. It has some nice characterization too, which doesn't hurt it a bit. Our writers certainly get ideas from strange places, don't they?

SOMETIMES a very short story can have a terrific punch in it. This is true of Alexander Blade's "Is This The Night?" We can't tell you anything about it without spoiling it for you—which should be enough to tell you there's something to spoil!

RICHARD CASEY asked your editor one day what would happen if we got a story in

which the lid was taken off the logical development of a science fiction theme. We said it might lay an egg, or it might be terrific. We are publishing the story in this issue, and we still don't know whether it's an egg or terrific. It made us chuckle, and sometimes even whoop. And we aren't so sure that it isn't more logical than the author thinks! Anyway, read "Valley of Delirium." It's exactly that!

IT IS said that Harvard Professors are the stashed collar of the very-very too-toos. (Whatever that means.) Anyway, Leo A. Schmidt is one of those (and a finer guy we never met—especially when it comes to mixing a hot rum toddy) and his story "Dr. MacDonough's Encephalosemanti!"—nuts, you pronounce it!—is enough to take the starch out of even the starchiest of the anti-pugnose caste!

"THE LYING LIE DETECTOR" lives up to its title, and it's by Leroy Verxa. There are quite a few unusual twists in this one, and it ought to keep you reading until the last line.

YOU Finlay fans will be delighted to note another fine illustration by your favorite artist in this issue. Finlay leads a parade of eleven artists this time. Robert Gibson Jones returns with a cover for "I Remember Lemuria!" (first of a series of at least four covers illustrating the "racial memory" stories); Frank R. Paul comes back with another of his "Stories of the Stars" covers; Robert Fuqua contributes heavily to this issue; Julian S. Krupa appears twice with illustrations we know you'll list near the top. J. Allen St. John gives us his fine work; Malcolm Smith dresses up your editor's stinker; Ned Hadley and L. Raymond Jones collaborate on "Valley of Delirium"; Brady gives us a full page, and lastly, Brad Pennington gives just the proper touch to Constance R. Dowd's hilarious article.

VISITORS of the month were Paulo Binder, creator of Adam Link; Al Magarian, male half of the Magarian team (he's doing comics now); a bunch of Michigan fans from Slaneback in Battle Creek; Walter Dunkelberger from South Dakota (he seems to be responsible for a lot of science fiction fan activity—and he hooked us for a \$1.00 membership in some darn thing or other); and Hutchinson of a Chicago daily, who did a story on our "racial memory" author, Richard S. Shaver—which brings us back to the subject with which we opened this column.

AS AN aftermath of this newspaper story, we received quite a few letters that more or less hit us in a vulnerable spot. We had expected the public to get a chuckle out of the article, and perhaps pick up the magazine to see just what it was all about—in which case we'd have them hooked, but good. However, there doesn't seem to have

(Continued on page 10)

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6. FUTURE RESEARCH

1. **Introduction**

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The OBSERVATORY by the Editor

(Continued from page 8)

been any chuckling. We got some very serious letters upholding Mr. Shaver, and not only that, claiming the same ability at remembering Lemuria!

PERHAPS one of the most interesting of the scientific theories culled from 12,000 years ago by this weird process is the theory of gravity being a push, rather than a pull. One of the letters we got was from a Chicagoan named Kayne, who has worked many years on that premise, and has completed a 500-page book (!) on the subject. He sent us a 32-page mimeographed brochure on it, which we've had some opportunity to study, and we have found that he has worked the theory out mathematically to a high degree. We are now more convinced than ever that "racial memory" is a fact.

FROM another reader we received a very surprising letter, relating his memory of Lemuria 30,000 years ago! He even remembers his name "Jhetong ko Tal" and that he was a mechanic in Lemuria. So sincere is he that he has been using stationery for years bearing the printed heading, "Jhetong ko Tal Research Foundation," and has dedicated a great part of his time to research into the subjects of Lemuria and racial memory.

THE strange fact of the matter seems to be that all over the world there are more people than we might imagine who have a firm faith in a memory of past civilizations, and who remember such vital things as Mr. Shaver, in his story in this issue and in issues to follow. It is these people who, we believe, will supply us with contributions to our stories of the past history of the Earth.

WE ARE hoping that many of our readers have evidences of such racial memories, and that we can gather together a mass of corroborative evidence that may lead to the answer to many mysteries of the past that have been hidden from the eye of research up to now.

THERE are many mysteries of the past that have intrigued investigators to an almost unbearable point. For instance, what became of Cro-Magnon man? How did he disappear from the face of the Earth almost overnight? What about the millions of inhabitants of Angkor Wat in Cambodia who actually did disappear overnight, leaving the evening meal still in dishes on their tables? Chinese historians and travelers actually visited this teeming civilization, and told

glowing stories of its great riches—gold so great in quantity that it took a thousand elephants to transport it. One night they loaded those thousand elephants and vanished, millions of people gone into nowhere. Where? How were the pyramids built? What were the glories of Babylon? What truth is there in the Chinese legend of being the people of the Moon, and of coming to Earth in rocket ships? What was the mystery metal of the Lemurians, orichalcum? What was the secret of their airships that walked on beams of light? What is the secret locked in the monster statues on Easter Island? Why do all peoples have superstitions of "little people"? What about the "giants" of the Bible? What about the "Garden of Eden"? And the rainbow bridge that led from Earth to the city of the Norse gods, Hel? Is racial memory really the means to unlock these secrets?

MR. SHAVER, in addition to sending us five manuscripts which he insists are true stories of Lemuria and of the Elder and Lesser Gods, with the added flavor of fiction to make them acceptable to our magazine, has written us a series of letters which we have bound into a colossal thick book. These letters contain so many startling things that your editor has spent four upon four studying them.

FOR instance, that amazing "alphabet" of the Lemurian language (see page 71) which we have found to fit at least thirteen different languages to date. Is it really the mother tongue? If so, we have here the most important discovery since the Rosetta Stone.

AND the theory of the sun being the cause of old age, and the practical means to prolong our lives by means of filters and centrifuges for our food and water and air intake.

PLUS the baffling (and way over our head because of our ignorance of mathematics) theory of reversed gravity, and the true nature of what science has chosen to call the "ether."

AND most startling of all, the existence of the Lemurian descendants (now reduced to idiots) still living in abandoned cities far beneath the surface of Earth, still possessing the ancient machines that are the cause of many unexplainable phenomena on the surface. (For all of these, see the footnotes to the story in this issue.)

IT COULD be a hoax! IF MR. SHAVER WERE THE CLEVEREST MAN THE WORLD HAS EVER KNOWN! But we can't believe this is so. The alphabet alone is too much to explain away in such a manner. We confess we are bewildered, impressed, and excited. And at the very least, we are delighted at the series of stories from the typewriter of Mr. Shaver. These, readers of *Amazing Stories*, are amazing stories

par excellence! We feel most sure of the fact that you will enjoy them more than of anything else. We place them on a level with the best works of Meritt (whom Mr. Shaver greatly admires, and whom Mr. Shaver gives credit for having more truth in his stories than even Meritt himself would have admitted), and the most popular of modern science fiction writers.

BUT Mr. Shaver has not been the only source of a great deal of material on Lemuria since we published his first letter. We have been deluged by a storm of corroboration from all over the country. We've already named several instances. But most intriguing comes from our old friend, L. Taylor Hansen, who authors the scientific mysteries in that magazine (all factual scientific material). He is at present visiting the Sioux Indians, and he has just written us of a legend they have of having once lived in a vast underground city and even more—astounding, of a great war that raged against an evil god who was finally overcome by the good gods and their warriors from outer space. This story is identical in almost every detail with Mr. Shaver's story of the battle with the evil god, Zelt, in the story in this issue. Mr. Hansen could get nothing from the Sioux Indians, because it means death to any tribesman who reveals an ancient secret—but he did tell them the story as he had learned it from other sources (other legends of other Indian races, as widely separated as South America and Egypt!) and they found no objection to admitting he knew some of their secrets. He tells of their excitement, and of how he wound up by telling them more than he learned. His major accomplishment was a positive identification of an Andean city as one of their own cities the location of which had been lost to their memories through the ages.

MORE intriguing to your editor is our gradual discovery that all the legends of the various races seem to have stemmed from Lemuria, and Mr. Shaver's stories tell us how. In our next issue, Mr. Shaver tells the story of the city of Hel, in Norse legend, and shows how it lies up with Lemuria. By using the Lemurian alphabet on the names of characters in legends of the various peoples, we have been flabbergasted to discover that the names (when translated) give the identical meaning to the character involved. For instance: Thor's name comes out as the organizer of men, or organizer of humans of value. Thor is known to the Norse as the God of War, the commander of the army. Certainly the army is a collection of humans of value.

FROM our own popular artist, H. W. MacCauley, creator of the Mac girl, came a very interesting sidelight to the Shaver stories. In his letters Mr. Shaver has spoken of the existing Lemurian deities, called deus, who actually convert surface people and defraud them of money and possessions which they wish to transport to

their inner world through secret openings. Artist MacCauley, unknowingly, gave us a direct parallel in a story of an old woman who visited his office, told mad stories of how her brother, Hitler, came nightly to give her rides in his airplane, and of how she was engaged to marry Robert Taylor. This old woman told one story of how she was defrauded of \$40,000 by a mysterious stranger to whom she simply "gave" the money when asked for it. (Shaver says hypnosis and mental tampering with rava.) This story she proved by newspaper clippings. However, MacCauley discredited all this, being interested solely in photographing her. She refused, so he staged it, so that when she emerged from a doorway, he would snap her. He succeeded, but when he developed the film, he found only an empty doorway. Which was exactly what the maddened hag screamed would happen when she found he'd tricked her. Upon hearing this story, your editor asked MacCauley, if he ever saw her again, to ask her this mysterious question: "What do you know of the caves?" Whereupon MacCauley's jaw dropped. "How did you know that?" he asked. "That's exactly what she confided to me one day in a secretive whisper!" Then we told him the story of Mr. Shaver. Mr. MacCauley, however, has an explanation: he says the old lady jumped out of the doorway and luck into it between the click of the shutter and the flash of the flashlight. We repeat, Mac has an explanation—but to date he hasn't tried to repeat his picture-taking performance!

REGARDING the Lemurian alphabet, we are frank to admit that it is not yet complete, and especially is it so in regard to key "words" rather than letters. Our modern language is made up of combinations of these key letters and key words, which serves as a stumbling block in many instances. However, in a future issue, we will publish a list of key words when it is fully completed from what we have already unearthed. As for the stories of Mr. Shaver, if for no other reason, we present them to you just as we present all other stories—we believe them to be super entertainment, and very finely written. **RAP**



"Junior! What's happened to baby?"



Glorious Yezze, Elder God, led us into battle against the fortress of Old Zait



"I REMEMBER LEMURIA!"

By **RICHARD S. SHAVER**

**12,000 years ago our ancestors, the
Atlans and Titans, left Lemuria, the earth,
for a new home on a dark world in space**

FOREWORD

PERHAPS my parents never realized the puns that would be made on my name when they christened me Richard Sharpe Shaver. Under ordinary circumstances the puns would have been of little consequence, but because of the amazing fact of my amazing memory of the life of another person, long dead, it has been incredibly hard for me to speak convincingly and to make

people believe in me. Invariably I get that oh-so-funny remark, "Sharpshaver, eh? A regular cut-up, eh, kid!" accompanied by a sly dig in the ribs and a very stupid, "Get it?" How can a man get a serious audience after that?

And yet, there it is for all who wish—to pun and pun again. If I achieve nothing else at least you may laugh, and to laugh is to be physically and

mentally healthy. For those of you who will read on and carefully weigh what I am about to tell you I am convinced there will be no thought of puns. Instead, when you consider the real truths behind what I say—and even better, *experiment and study to corroborate them*—it seems to me to be inevitable that you will forget that I am Richard Sharpe Shaver, and instead, am what science chooses to very vaguely define as the racial memory receptacle of a man (or should I say a being?) named Mutan Mion, who lived many thousands of years ago in Sub Atlan, one of the great cities of ancient Lemuria!

I myself cannot explain it. I know only that I remember Lemuria! Remember it with a faithfulness that I accept with the absolute conviction of a fanatic. And yet, I am not a fanatic; I am a simple man, a worker in metal, employed in a steel mill in Pennsylvania. I have sent the editor of this magazine a picture of myself which he tells me he will reproduce along with this foreword, so that you may see for yourself what I look like, and that I am just an ordinary man, as normal as any of you who read this and gifted with much less imagination than most of you!

What I tell you is not fiction! How can I impress that on you as forcibly as I feel it must be impressed? But then, what good to impress it upon those who will crack wise about me being a "sharp-

shaver"? I can only hope that when I have told the story of Mutan Mion as I remember it you will believe—not because I *sound* convincing or tell my story in a convincing manner, but because you will see *the truth* in what I

say, and will realize, as you must, that many of the things I tell you are *not a matter of present day scientific knowledge* and yet are true!

I fervently hope that such great minds as Einstein, Carrel, and the late Crile *check* the things that I remember. I am no mathematician; I am no scientist. I have studied all the scientific books I

can get—only to become more and more convinced that I remember *true* things. But surely someone can definitely say that I am wrong or that I am right, especially in such things as the true nature of gravity, of matter, of light, of the cause of age and many other things that the memory of Mutan Mion has expressed to me so definitely as to be conviction itself.

I intend to put down these things, and I invite—challenge!—any of you to work on them; to prove or disprove, as you like. Whatever your goal, I do not care. I care only that you believe me or disbelieve me with enough fervor to do some real work on those things I will propound. The final result may well stagger the science of the world.

I want to thank editor Ray Palmer for his open mind and for the way he has received the things I have told him



RICHARD S. SHAVER

in addition to what I have written in this story of Mutan Mion of ancient Lemuria. It began when he published my ancient alphabet in "Discussions"¹ and requested the readers to carry out checks of their own. I myself did not realize the extent of the alphabetic (more properly phonetic) language.

¹ January issue of AMAZING STORIES. Some of the reports by our readers were subsequently published, but the great majority were not. These reports proved to be the most amazing your editor has ever received on anything published in this magazine. They would seem to indicate beyond all doubt that the "ancient language" of Mr. Shaver is part of an original "mother tongue" from which all Earthly languages have sprung. For example, the name Mutan Mion, broken down into the letters and sounds of this ancient language becomes MU—"man"; T—"integration," "growth"; AN—"animal." MION means "manchild seed." So the name means "man spore cultured to new forms by integration growth forces." In other words, a synthetic mutation by the use of force or rays.—Ed.

But surely there must be tremendous significance in the fact that the alphabet *fits into* every language to which it has been applied, to the amazing percentage of 75% in the German to 94% in the ancient Egyptian! Even in Chinese and Japanese it ranked consistent nine out of ten times.

To me it is tragic that the only way I can tell my story is in the guise of fiction. And yet, I am thankful for the opportunity to do even this; and to editor Ray Palmer I express my unbounded gratitude. I know that if even a few of you go to the lengths he has gone to check many of the things I remember, a beginning will have been made to something, the ending of which (if ending there is) awes me beyond my poor power to express my feelings.

—RICHARD S. SHAVER.

CHAPTER I

City of the Titans

I WAS working in the studio of Artan Gro when I heard a great laugh behind me. If ever there was derision in a laugh, there was derision in this one. I flung down my gaudy brushes and my palette and turned about in a rage—to find the master himself, his red cave of a mouth wide open in his black beard. I cooled my temper with an effort; for great indeed is Artan Gro, master artist of Sub Atlan.

"I am sorry, Mutan Mion," he gasped, "but I can't control my laughter. No one ever has conceived, much less executed, anything worse than what you have put upon canvas! What do you call it, 'Proteus in a Convulsive Nightmare'?"

But Artan Gro *could* control himself, I was sure. It is one of the things I have learned of the really great in the arts; they make no pretenses. He was

laughing because he wanted to tell me frankly what he thought of my ability as an artist. It is bad enough when your friends mock your work (and they had), but when the master is convulsed with laughter it is high time to wake up to the truth.

"It is true, great Artan Gro," I said humbly. "I want to paint but I cannot. I haven't the ability."

Artan Gro's expression softened. He smiled, and as he smiled it was as though he had turned on the sunlight.

"Go," he said, "go; to the deeper caverns at Mu's center. Once there study science; learn to mix the potions that give the brain greater awareness, a better rate of growth." He patted my shoulder and added a last bit of advice. "Once you have mixed the potions, take them. Drink them—and grow!" He passed on, still chuckling.

Why is the truth always so brutal? Or does it just seem brutal when it comes from those wiser than you? I slunk from the studio; but I had already determined to take his advice. I would go to Tean City, at Mu's center. I would go to the science schools of the Titans.

Never before had I considered leaving Sub Atlán, my birthplace, or as I should express it, my growth place, for I am a culture man, a product of the laboratories. In fact, I remember no other place on Mu, although it is a fact that during the process of my development to culture manhood, I roamed the culture forests of Atlantis,² which is the name for Surface Atlán. Sub Atlán is just below Atlantis, while Tean City is located at the center of Mu, at a great depth below Sub Atlán. The walls of the great cavern in which Tean City is located are hardened to untellable strength by treatment with ray-flows which feed its growth until it is of great density. There are many other cities

which grew through the centuries to vast size, but none so great as Tean City. Some are abandoned, but all are indestructible; their cavern walls too dense to penetrate or to collapse.

Since Tean City is located near the center of Mother Mu, gravity neutralizes itself by opposition. It is very comfortable. Many of the Titans live there, and in fact, it is almost a Titan city. There also are the mighty ones, the Elders of the Atlán race's government. Huge they are, like great trees, many centuries old and still growing. I had long wished to see them, and now that I had decided to go, the thrill was greater than any I had ever experienced. I was going down into the city of many wonders!

OUT on the street I took one of the many vehicles that are provided for travel about the city. These vehicles, their weight reduced by a gravity deflection device, are powered by motors whose energy is derived from a gravity focusing magnetic field, by which one side of a flywheel becomes much heavier than the other. This is accomplished by bending gravity fall³ in the same way that a lens bends a light ray.

The topless⁴ buildings of Sub Atlán fled by me; and soon I neared the squat entrance to the shafts that fell from Sub Atlán to Center Mu, to Tean City,

² According to Plato, Atlantis was a continent located some four hundred miles west of the Pillars of Hercules (Gibraltar). In the *Timæus*, he describes it as an island larger than Asia Minor combined with Libya. Beyond it, he says, were an archipelago of lesser islands. Atlantis had been a powerful kingdom nine thousand years before the birth of Solon (from whom Plato heard of Atlantis reputedly as told to Solon by Egyptian priests), and its armies had overrun the Mediterranean lands, when Athens alone had resisted. (It has been a point of difference between students as to whether Plato referred to the "Mediterranean lands" as lands now inundated by the Mediterranean Sea, or the lands surrounding the sea.) Finally the sea overwhelmed Atlantis and its shores marked the spot. In the *Critias* Plato gives a history of the commonwealth of Atlantis.

There are many other traditions of lands located west of Gibraltar: The Greek Isles of the Blessed or Fortunate Isles; the Welsh Avalon; the Portuguese Anfilia or Isle of Seven Cities; and St. Brendan's island. All except Avalon were marked on maps of the 14th and 15th centuries.

The legends of the Sargasso Sea are said to have sprung from encounters with the sea of weeds which periodically grew over the shallowly sunken continent.—Ed.

³ The reader will note the curious use of the word "fall" in connection with gravity. Later in the story, the author elaborates on the subject of gravity in a very amazing manner, propounding a theory which your editor has examined in detail and by which he has been utterly confounded. This jibb "focusing" and "deflecting" of gravity your editor cautions you to accept in the literal sense until Mutan Mion's story gives us more on the subject of gravity. At present your editor is engaged in making an exhaustive survey of Mutan Mion's references to the nature of gravity in this and two other stories, and from many personal letters written by Mr. Shaver. When completed, this survey will be presented to leading scientists for an expert examination.—Ed.

home of the Titans.⁵ I knew that swift elevators dropped down these shafts; but I had never traveled in one of them.

Because I knew the control-man of

⁵ Curious as to the literal meaning of the word "topless" we wrote to Mr. Shaver for a better description of the buildings of Sub Atlan. He revealed that (as Mutan Mion's memory told him) they were topless in the sense that they were roofless. Sub Atlan is located in one of the giant near-surface caverns that underlie Surface Atlan, or Atlantis, which is mostly forest with scattered large buildings. Since the elements are not a factor, almost all buildings are constructed without roofs to admit a maximum of light. Sub Atlan must have presented a strange appearance, for no two buildings were architecturally alike; some of them huge spheres, or multi-sided geometric shapes, tall spires, or merely rambling structures of no apparent intentional design. The reason for this was to provide variety to interest the eye, which would otherwise be jaded by constant contemplation of the unending sameness of gray cavern walls and roof of stone.—Ed.

⁶ When asked to describe the Titans Mr. Shaver sent us the following notation, which is perhaps the oddest of all his communications. When queried about its oddity, he merely replied that he had "answered your question" and gave no further explanation. We quote:

"Our great race, the Atlans, together with the Titans, our allies, and often our fellow citizens, stream through all known space and watch ever for the birth of new suns. Then, too, there are the Normans; but the Nor-men shun all suns and can only be found where the sun rays shine not.

"When our Atlan sciences hear of or see a new sun born, our ships flash swiftly through the void, to test the rays for poisonous emanations. When they find clean heat from a surface shell of pure carbon, fast upon their trail come the first great colonization ships. For our race is fecund beyond imagination and has little death from any cause."

Obviously this is nothing from the "racial" memory of Mutan Mion, but seemingly something from an Atlan himself! Here and there, through Mr. Shaver's correspondence with the editors, such departures from the identity of Mutan Mion occur, and we can only suggest that Mr. Shaver's racial memory contacts extend not only to the culture man, but to other beings as well. Mr. Shaver himself cannot explain, and in many instances, is unaware that such extensions exist.

The reader will here, again, note several inescapable references, such as "poisonous emanations" and "a surface shell of pure carbon." Later in the story Mutan Mion tells of these things in great detail, and in them gives still another of the amazing scientific theories that stagger the imagination. —Ed.

one of the elevators, having talked with him often of Tean City and the wonders he had seen in it, I went to his shaft for my descent. He was glad to see me, and very much surprised to learn that I was going to Tean City.

"You will never regret it!" he declared.

The car dropped sickeningly, so swiftly that a great fear grew in me that I would be crushed by deceleration when we finally stopped. In panic I watched an indicator's two hands move slowly toward each other as though to cover its face in shame. Then, with little sensation, the car stopped. Here at the center of Mu I had become nearly weightless and the ceasing of even such swift motion did not have ill effects upon my weightless body. I knew that I would not have that fear again.

Two fat Atlans stepped out of the car ahead of me, sighing with relief at their renewed weightlessness, which they had obviously been anticipating. As I was about to follow them from the car, the control-man drew me aside.

"Fear rides the ways down here," he whispered, his sharp-pointed, cat-like ears quivering an alert. "Fear is a smell down here that is ever in the nose—a bad smell, too. Try to figure it out while you are down here; and tell me, too, if you get an answer."

I did not understand what he meant, but I promised anyway. The smell of fear, in Tean City? Fear of what? Certainly he could not mean that silly fear of the elevator . . .

He gave me a number disc, and I passed on out of the cage. I walked out into Tean City!

Immediately I was immersed in the sensually shocking appeal of a variform crowd, mostly at this hour, a shopping rush of female variforms. While there were many of my own type, and of the

elevator control-man's type, there were a greater number of creatures of every shape the mind could grasp and some that it could not. All were citizens; all were animate and intelligent—hybrids of every race that space crossing had ever brought into contact, from planets whose very names are now lost in time. The technicians may have been wrong in the opinion of some when they developed variform breeding; but they have certainly given life variety. I had never seen so many variforms^{*} before.

AT A corner of the vastly vaulted way where many rollat platforms[†] crossed and recrossed each other, I stepped to a telescreen and dialed the student center. The image of a tremendous six-armed Sybyl female filled the screen and the electrically augmented body appeal of the mighty life within her seized the youth in me and wrung it as no embrace from lesser female ever had.

"And what" her voice shook me as a leaf in an organ pipe "might a pale and puny male like you want in Tean City? You look as if you never had enough to eat, as if love had passed you by. Did you come down here because no one wanted you elsewhere?"

I grinned self-consciously back at her image, my voice a feeble piping in comparison to hers.

"I have come to learn something beside drawing lines around dreams. I am a painter from the subsurface who has decided that knowledge of actual

growth is more important than the false growth of an untrue image upon a canvas." I wondered what the master would have said to hear me.

"You are right," she boomed back, her six arms engaged in complex and mysterious movements, picking up and laying down instruments and tools in bewildering rapidity, her attention elsewhere yet enough remaining on me to hold me bound in an attraction as strong as a towing cable. She was a forty foot Titan, her age unknowable. As I thought upon this and tried not to think of the immense beauty and life force of her, I suddenly realized she was hiding fear. I have a peculiar faculty for sensing hidden emotions. That bluff greeting had been a hidden wish to drive me from some danger. But I did not speak of it, for I read that caution in her; a very strong mental flow that fairly screamed DON'T.

This kind of fear was a wonder and a new thing to me, for danger was a thing long banished from our life. Then she spoke, reluctantly it seemed.

"Go to the center of the Hall of Symbols. There you can ask a student or an instructor who will tell you all you need to know."

The grip of the woman life in her left my mind and she was gone from my vision. As I turned from the telescreen my mind insisted on visualizing that six-armed embrace and its probable effect upon a man in love. I shivered in spite of the warmth, but not from fear. The blood of the Titans was alive, I thought; strangely and wonderfully alive!

I STEPPED into a rollat at the curb, inspected the directory, then inserted a coin and dialed the number of the building that housed the Hall of Symbols. I leaned back while the automatic drive of the rollat directed the car

^{*} Obviously variforms are not natives of other planets, but hybrids developed from many interplanetary life forms mated with Titans and Atlans by deliberate applications of mutative rays in the laboratories of Mu's technicians. It is extremely interesting to note that all have the status of citizens.—Ed.

[†] Moving connected vehicles on the ways and walks which carried the bulk of pedestrian travel.—Ed.

through the speeding traffic, its electric eye more efficient than my own.

Yes, much more efficient than my own at the moment, which were wandering over the figure of a variform female on the walk whose upper part was the perfect torso of a woman and whose lower part was a sinuously gliding thirty feet of brilliantly mottled snake. You could never have escaped her embrace of your own will once she had wrapped those life-generating coils around you!

I thought upon it. The gen of these variforms was certainly more vital; possibly because the Titan technicians who lived here kept the people healthier. Perhaps the hybrids were naturally more fecund of micro-spore. It had indeed been a day of brainstorms, I mused, when some old technician had realized that not only would a strong integrative field with a rich exd³ supply cause all matter to grow at an increased rate, but would also cause even the most dissimilar life-gens to unite. It had been the realization that had resulted in various form life. Most of the crosses by this method had resulted in an increased strength and fertility. They now were more numerous than four-limbed men, and often superior in mental ability.

Automatically my mind associated the embrace of the snake woman with the six arms of the giant Sybil of Info; and I decided that I understood why Artan Gro had driven me here with his scorn. If I didn't learn about life here I never would anywhere. That had been what he had reasoned.

Soon I was striding between the pillaring fangs of the great beast's mouth that was the door of the Hall of Symbols where the school ways converged.

³ Exd is Atlan for ex-disintegration or energy ash. It was the principle content of the beneficial vibrants. It is the space dust from which all matter grows into being. Mutan Mion amplifies the exd theory later on in the story.—Ed.

About was the bustle attendant to any rollat way station; bearers rushing; travelers gazing about lost in wonder at the vaulting glitter of sculptured pillars and painted walls, done by men of a calibre whose work ro⁴ like myself cannot grasp entirely.

Paintings and sculpture here hammered into the brain a message of the richness of life that immense mutual effort can give the life unit, the pro. This richness of life was pictured in a terrible clash with evil, its opposite.¹⁰ The hot fecundity of life and health growth was a sensuous blow upon the eyes, the soul leaped to take a hand and make life yet more worthwhile. I could not cease gazing at the leaping vault of pictured busy figures whose movements culminated in that offer to the spirit of man to join them in moulding life to a fit shape.

MY RAPT study of the paintings was interrupted by the sound of a pair of hooves that clicked daintily to a stop

⁴ Here again we had to appeal to Mr. Shaver for amplification. We certainly got it, and along with it some amazing thoughts. Ro (he says) is a thing of simple repetitive life pattern easy to understand and control. To ro you is to make you do things against your will. A large generator of thought impulse can be set up to ro a whole group of people. Row the boat is modern and the meaning has become physical force and not mental force. Ro the people was an ancient method of government. Romantic was the name of such a government. Ro-man-tic (science of man life patterning by control). It is the same concept as used by some scientists when they say "hypnotically conditioned." It is not necessarily an evil government method, but is one that was necessary. Any person is ro who is weaker than the mental impulses about him. Men are ro today because they are not self-determining, though they think they are. We are parts of a huge juggernaut, and we are ro in consequence. The determining forces that make our thought what it is are from outside when we are ro, from inside when we are men or gods.—Ed.

¹⁰ This is indeed a strange comparison. Evil is the opposite of live, the inference being that to be evil is to die. Oddly (or significantly ?) evil is live spelled backward.—Ed.

beside me. I glanced at the newcomer, who had stopped to stare up at the paintings also in that curious way that people have when they see another cranning his neck—and my glance became a stare.

What was the use of aspiring to be an artist, my reason said, if those great masters who had placed that mighty picture book on the vaulting walls above were so easily outdone by the life force itself!

She was but a girl, younger than myself, but what a girl! Her body was encased in a transparent glitter; her skin a rosy pale purple; her legs, mottled with white, ended in a pair of cloven hooves. And as my brain struggled to grasp her colorful young perfection—she wagged her tail!

It was all too much. Speculating about the life-generating force possible in the variform creatures was one thing; but having it materialize beside you was another thing entirely. Such a beautiful tail it was. Of the softest, most beautiful fur.

"What were you staring at?" she asked. "The paintings?"

I stuttered, then answered. "The paintings . . . I guess . . . yes, the paintings. I'm a . . . painter . . . was a painter . . ." I gave up. I couldn't talk, I had to look.

"They are marvelous, aren't they," she declared enthusiastically. "I always look at them when I come down to the school. I am studying medicine. Now take that painting up there—"

On her arm and breast I saw the medical school insignia; a man's figure struggling with a great snake, disease.¹¹ It took brains to study medicine. This exquisite young thing, so full of gen force, so powerfully attractive, was smart too. And almost instantly she proved herself to be extremely friendly and companionable. She went on talking, describing, theorizing in a gush of amiable conversation that left me dizzy, gasping, and admiringly breathless. She told me *everything* about the paintings, the statues.

And before I realized it, we were walking on together. She was full of all sorts of information, and it seemed she had taken it upon herself to be my guide, to inform me the meaning of everything we saw. Her cheerful chatter soon informed me all about herself, her studies, the schools, the great doors that led to each one from the central gathering place of the school rollat ways.

The Hall was justly famous for these doors. Before us now was the door to the medical school, formed of pillaring figures struggling with the coils of snakes. Next to it was the marine school door, formed of a crab whose huge claws met to form the arch. A planetron, a pendulum device to tell of the nearness of hodies in space, formed the entrance to the school of space navigation. All the ages of science of immortal growth had combined here in the symbols that formed the many doors.

¹¹This insignia lives today in the legend of Apollo! According to the Greeks, Apollo was a son of Zeus himself. Disease is typified in the legend by the python, which Apollo killed. Etymologically his name signifies one who "drives away disease." Roscher's derivation names him as the "sun god." Using Mr. Shaver's ancient language, he is "authority, energizer, power source of man's growth." This is startling when we discover, upon studying the legends of Apollo, that he

was variously called god of prophecy; god of agriculture; ruler of seasons; keeper of flocks; rearer of boys; sponsor of gymnastics; the helper; healer and seer; averter of evil; god of song and music; leader of the masses; embark and disembark; god of streets and ways; one who stands before the house (as protector from violence and disease); originator and protector of civil order; founder of cities and legislation. Apollo, says Mutan Min, was a son of one of the Titans of Mu!—Ed.

CHAPTER II

From Art to Embryology

FROM the moment that I pocketed a disc that bore the faun-legged girl's name and address, I was no longer an aspiring artist; I wanted to know what she knew, wanted to learn what she was learning.

Arl was her name, a short, sweet name for a girl and hard to forget, too. You can't forget a girl who wags her tail at you just like that anyway.

And so, she took me into the medical school and directed me to her own teacher. I became a member of the class immediately and discovered that I had entered upon the opening discourse.

The class was dominated by the immense presence of the teacher, a son of the Titans, bearded and horned, expounding in the exact syllogism of the technicon training. As he spoke, I became certain that this dynamo of human force should soon charge such a small battery as myself with everything in the way of knowledge I could assimilate.

There was only one slight disturbing factor. Just as I had sensed a strange, deeply buried and secret fear in the Syhyl, I knew that in the mind of this great son of the Titans there was a gnawing something that a part of his brain dwelt on continually. Fear was a smell that was ever in the nose down here in Tean City! The realization disturbed me so much that I failed to absorb a portion of the teacher's discourse. My absorption must have caught his attention, too, for I saw him staring disapprovingly at me. With a start, I re-concentrated my mind on what he was saying.

"... a great cold hall hung in space. Once it had been a mighty, living plan-

et, swinging ponderously around a dying sun that it had never seen, being covered with clouds. Then that sun had gone out, and the deadly ter¹² stiffened the surface life into glittering death.

"The planet's forests, which had lived in dense, dripping fog, had, in their many ages of life, deposited coal beds untold miles in depth—clear down to the stony core of the planet. No fire had ever touched these forests, because the dense fog had never allowed fire to burn.

"Venus, our nearest neighbor in space, is such a planet now, although much smaller. As it is on Venus, so it was on the unknown planet.

"Hanging in space the dead immensity of this hall was largely potential heat, for its tremendously thick shell was mostly pure carbon.

"Such once was the sun, your sun and mine; the sun of which Mu is a daughter.

"Then a blazing meteor, spewed violently from some sun in space, came flaming toward this cold ball. Deep it plunged into the beds of carbon. The fire spread swiftly—an ever-fire of disintegration, not the passing-fire of combustion—and our sun was born into life-giving flame!

"A carbon fire is a clean fire and contains no dense metals like radium, titanium, uranium, polonium—whose emanations in disintegration in suns cause old age and death because minute particles given off accumulate and convey the ever-fire into the body, there to kill it in time.

"Then sun heat was clean, and life sprang furiously into being on its daughter, Mu's surface. Nor did this life die—death came only by being eaten. Then life suffered old age not at all, for there was no cause."

¹² Ter—the Lemurian word for cold.—Ed.

THE voice of the teacher paused a moment, and now indeed I knew that there was much for me to learn. Here was something that struck deep into me with an instantly vital interest. Most provoking of all was his peculiar emphasis on the word "then." I could not help the question that sprang to my lips.

"Why do you say 'Then life suffered old age not at all, for there was no cause.'? Is there cause now?"

It was as though I had placed a torch beneath the hidden fear in the Titan's eyes, for it flamed forth suddenly for all to see; but it was as quickly quelled. All in the class looked at me with that shocked expression which plainly said I had overstepped my bounds; but in the eyes of Ari I thought I saw the gleam of approval, and I found a dam to hold back my ebbing courage.

The teacher looked at me, and I saw kindness in his eyes.

"You are new here, Mutan Mion. Therefore it is easy to understand that you have not heard of the projected migration of all Atlans to a new world under a beneficial sun . . .

"Yes, young ro, there is cause." He was answering my question with determination now, but he was not speaking to me alone; he was making his answer a part of his discourse. "I have spoken of the carbon fire as a clean fire. By this I mean that the atoms of carbon, when disintegrated, send forth the beneficial energy ash called exd which can be assimilated by our bodies and used to promote life-growth. However, the source of this ash is not carbon alone, but all other elements excepting the heavy metals such as I mentioned before. It is when these heavy elements begin to disintegrate in the ever-fire that we come to the cause of age.

"The particles of radium and other

radioactive metals are the poison that causes the aging of tissue. These particles are thrown out by all old suns whose shell of carbon has been partly or altogether burned away, permitting the disintegrating fire to reach and seize upon the heavy metals at the sun's core. Our sun has begun to throw out great masses of these poisonous particles. They fall upon Mu in a continual flood, entering into living tissue and infecting it with the radioactive disease we call age.

"Through the years, the centuries, these poisons accumulate in the soil of the planet, and are continually being washed out of it by the rains with the result that all the water on Mu is becoming increasingly contaminated. When these waters are drunk, the poisons accumulate in the body, finally becoming numerous enough to completely halt all growth and still worse, to prevent any effectual use of exd, which is the food of all integration.

"The technicians, of course, have devised means to protect us from the accumulation of the age poisons, but it has become evident that their efforts are not entirely foolproof. We have discovered that we are living on a world that circles a sun that is growing old and is therefore deadly. We are living in the shadow of death, a shadow that will grow greater as the years pass until finally death will strike us all. We would, if we remained, not even begin to live out our lives. Centuries and centuries would be lost to us, and ultimately, we might not even attain the initial growth of maturity!"

I ventured another question.

"What methods have the technicians devised?"

"They are simple ones. Multiple distillation of the water in which we drink and bathe; treatment of the water in a centrifuge to remove the very finely

divided age poisons that cannot be removed by distillation; ben generators to create a magnetic field of ben energies; air centrifuges to remove poisons from the air. But I must impress upon you that it is impossible to shield us from all of the age poison; from that small amount that actually falls upon our own bodies and accumulates there as it does in the water. Eventually, if we remain on Mu, we will grow old,¹³ and finally die."

I looked him squarely in the eyes, respectful in a degree equal to the kindly interest that shone in his as he returned my look.

"It is not the age poisons you fear," I accused.

He looked at me silently; and a flood of force seemed to flow through me,

encouraging me, protecting me, cautioning me. It was the same feeling I had gotten from the Sybil.

"Come, students," he said gently. "We will go now to the embryo laboratory."

BEFORE we entered the laboratory we were given nutrient potions prescribed by the Titan for his students to make them more receptive and hence his work easier. We were told that we would receive these potions regularly. Even as I took the first draught my brain throbbled with a new growth of ideas and strange new images. I was exhilarated beyond all imagining, and my enthusiasm knew no bounds. I took Arl's hand in mine as we trooped into the laboratory.

of the poison to the seed. The simple filtration processes of birth and seeding CAN BE COPIED by man, thus putting off old age.

"Here are a few verbatim quotations from Madame Curie's notes: 'Finally, the radiation of radium was contagious. Contagious like a disease and like persistent scent. It was impossible for an object, a plant, an animal or a person to be left near a table of radium without it immediately acquiring radioactivity—becoming radioactive—a notable activity which a sensitive apparatus could detect.' A later page: 'Thus the radio elements formed strange and cruel families in which each member was created by degeneration from the mother substance—radium was created by degeneration from uranium—polonium from radium, etc.' And from a later page: 'When one studies strongly radioactive substances special precautions must be taken if one wishes to be able to take delicate measurements. The various objects used in a chemical laboratory and those used in physics experiments all become radioactive in a short time, and effect photo paper through black paper. *Dust, the air of the room, one's clothes* all become radioactive. The evil has reached an acute stage in our laboratory.'

"Note the word *mother*. The sun is the mother source of radioactives.

"It is a matter of common knowledge that certain watch factories formerly allowed workers (young girls of twenty) to tongue-tip the brushes with which they painted the radioactive dials. They died of OLD AGE at twenty and twenty-five years! Not of a disease, but of age poison; radioactive particles, whose origination is from the disintegration of the heavy metals of which radium is a member!"—Ed.

¹³ Impressed with the implications contained in this portion of the story of Mutan Mion, we wrote Mr. Shaver for additional information on this theory of the cause of age. This information is curious, because some of the theories seem to be modern (by Mr. Shaver) and others those of Mutan Mion, with no particular designation as to which is which. However, we present the whole for your judgment.

"The sun itself seems to be the mother source of all radioactivity, infecting all the earth's surface and all the life on its surface. The sun projects minute disintegrations down upon us in a steady, numerous rain whose effects we call age. In water the poison is heavily present in suspension, especially so in thermal springs. In the air the poison floats forever with the tiny thistledowns of dust it has infected and to which it clings. It settles on the leaves of plants. So we take the poison in with every breath, with every bite of food, with every drink of water; thus we age as the poison accumulates.

"But we do not have to let in that poison; we can protect ourselves and grow through a longer youth to a much greater age, with superior mental powers. It is very plain that a mother's body cells, although replaced every four to seven years, are not young because they remain in contact with the poison retaining fabric of the body and so age swiftly. Yet, the baby is young. Young because it gets filtered blood, filtered through the placenta—and would remain young if the poisons were to be continued to be filtered out by a duplication of the placenta filter. The stalk of a plant is old, yet its seed is young, capable of reproducing itself without passing on the poisons of age. It is because the stalk contains a filter to prevent passage

It was truly a wonderful place, the most amazing I had ever seen. I felt like a mite admitted to the treasure-house of a giant. Here were things that were beyond my intelligence to create of my own mind power; and yet I was being given free and welcome access to all of them, to learn from them, and to use the knowledge if I wished in my future life and work.

Many strange machines filled the laboratory, all performing tasks that I could only guess at. But these machines were subordinate to the real science of this great room, being designed only to chemically and electronically nourish and develop the many human embryos that moved and grew in synthetically duplicated mother-blood in sealed bottles.

The older ones kicked and tugged healthily at the grafted umbilical tube which supplied the life fluid—called Icor, the "blood of the gods." And it was this blood that was the subject of the lecture the Titan now gave us.

He told us of the upkeep and preparation of this fluid, both in the embryo and the adult; the difficult and important part being (he now stressed his words with greater emphasis with his attention bent especially toward me) the process of detecting and removing the slightest trace of the radioactive poisons that cause age.

I studied and I learned! These were the processes which had given the planet Mu its health and enabled us to live under more aging suns than other races. These were the life methods that had given us our fecundity; which had populated space for thousands of centuries with the seed of Atlan. I wanted to know all there was to learn about them.

The Titan, an old master at this most basic process of Atlan life, had imbued me with an enthusiasm for the true creation of life in its infinite pos-

sibilities of growth—such as no mere painter ever had. The delicate handling of those ultra-minute products of disintegration from which primary integrations are formed; the mixing of these integrations into the atoms of elements, the chemistry of combining these atoms into the molecules of the substances used in the manufacture of the synthetic blood, Icor—all these steps were sheer artistry, yet were made as simple as child thought by the genius of the Titan.

ONCE more the Titan commented on the proposed emigration from Mu, weaving it into his lecture. There seemed to me to be an undercurrent of double meaning in his motive for repeating it; a double meaning that I strove to, and succeeded, associate mentally with the fear-thing that was something else and also something so secret it must not be mentioned. It was as though even the fact that there was fear of that "something" must be kept secret.

Our aging sun (he said) threw off increasingly large amounts of these sun's seeds, small but dense and active disintegrative particles, and I learned that keeping Atlan's peoples young was an increasingly difficult job for the technicians. I learned that the coordinators and rodite¹⁸ were preparing the plans and ships for our migration to a young, new-born sun, where the force setup of life conditions left a greater margin of exd for intake of power, where integrance went on at a faster pace, and where the infection that caused the occasional trouble with detrimental energy robotism or detrimental err¹⁸ in the human did not occur.

When the lecture in the embryo laboratory was finished we filed back to the classroom, and there the Titan flipped the switch that controlled the

¹⁸ Rodite—Life pattern synchronizers.—Ed

teleyes that supplied the home telesets of many with the course. We had not been dismissed, and I could see from the puzzled looks on the faces of the other students that this was not in accordance with the regular schedule.

For a long moment the Titan looked at us, and especially at me. Then he spoke:

"Today things have been said and seen and discussed in this class that had no direct bearing on the course you came here to take. You, Mutan Mion, have been the most brash—" my face grew red, and he hastened to add, "No, Mutan, I do not mean that you

have been too forward; I meant brash in the sense that you have exposed yourself to a greater danger than that of my wrath." His eyes twinkled at the word wrath, and I knew that such would never be much of a danger! "I meant the menace that has caused the fear you have somehow seen in me. Perhaps you have sensed this in other places in Tean City, among others of the Titans; so it must be, for you to have been so certain of it as to challenge me.

"Yes, there was, and is, fear in me. And it is a fear that we all try to keep secret because those of us who show fear also show suspicion if not knowledge, and either has been equivalent to the signing of a death warrant. There are spying rays on us . . . at the moment we are screened . . . that seek out our knowledge and destroy us before we can coordinate it into an effective counteraction to the thing that is going on; to the thing we fear."

"What is that thing?" I breathed aloud, so intense was my interest.

THE Titan drew a deep breath. "It has come to me that certain groups of Atlan are against the projected migration, and the recent disappearance of several men important to our work lends color to the story. Of course we all know that the only units able to do anything of the kind would be the key rodite of Sub Atlan and Center Mu. Some of these may have accidentally suffered a severe flashback of detrimental ion flow, so that their will has become one under detrimental hypnosis. What rodite area has become so corrupt as to allow such a condition to go unchecked I cannot understand; but that we are all in danger until the thing is checked is most certainly true.

"Therefore, since you here have gained an inkling of something wrong, it

¹² This is mainly due (explains Mr. Shaver) to depolarization of the matter of the brain; it is no longer earth polarized, it is sun polarized—and hence induces the disintegrant flows from the sun into the brain by simple dynamic induction. I think a magnet could be sun polarized and point to the poles of the sun just as an ordinary compass points to the poles of the earth. This is what happens to parts of the brain; they become sun polarized. In the desert this is known as "cafard," to become crazed and kill until killed. Others are just stupid, depending on what parts of the brain are affected. The Malay "amok" and the Norse "berserk" are the same phenomena. When it lies in the part of the brain devoted to memory, the result is absent mindedness. When it lies in the nervous system and ego recognition or activating centers, the victim is a killer or a repressive reactionary. It is simply true that man is an electrical machine which functions well when his energy flows are of his own creating, but functions especially ill when the energy flows are from the sun.

The sun is quite a dynamo; it always gives off, from the surface; while earth always takes in, from the surface. Much of this intake is "snap-back"; that is, it is returning to a state of matter. Gravity is merely the disintegrant energy of suns returning to material form. Much of it, however, is like radium, a persistent disintegrant seed of a sun. Radioactivity is the seed of disintegration.

Hence, a mind powered by sun particle energy flows of a detrimental nature becomes robot. The result is robotism, or the inability to think constructively. Victims of detrimental are have but one basic thought, to kill, in keeping with the natural elemental instinct of the disintegrant metals. (The reader has been presented here with two sensational theories which appear in complete form later in the manuscript; the nature of gravity, and the interrelation of energy and matter in an endless circle.—Ed.

is only your right to be aware of it, so that inadvertent words may not cause you great harm. Also, we must fight this thing; and *all of us* must fight. So you may consider yourselves deputized by the ruling life of Mu to seek out the information that will clear the way for the migration. Until that is done we suffer fear, not new to me, but new to most of you.

"You may go."

Looking back at his gigantic form as I left the classroom, I saw him musing deeply; and the concern on his face told me that things must be even more fearful of consequence than he had made us believe. Reason told me, too, that it must be so—for great indeed must be the evil that can bring fear to the heart of a Titan, the super being of all Mu and of the universe.

CHAPTER III

Terror in Teen City

THAT evening Ari took me to a dance. Never had I known that there could be such pleasure! And as a part of it all I discovered that my education was to continue through every waking hour, whether in scheduled class or not. There was so much to be learned from actual living! And Ari, it seemed, was determined that nothing should be lacking in my education. Nor did I object, for nothing suited me better than to have her, beautiful tall and all, showing her friendship and interest.

The dance, she told me on the way to the hall in a rollat car, was very scientifically handled by trained technicians. The stimulation of human attraction between male and female, she told me, was due to the generation of many kinds of tiny and fecund spores which grow and are released upon

stimulus by male and female. The male spores grow in the female and vice versa, just as pollen between flowers. This cell pollen and the sensation of its growing presence is love. I could imagine the immense fecundity given this process by the strength of the Atlan race, whose growth and youth¹⁶ never cease.

We arrived at the place where the dance was to be held, and I found a great room, tastefully draped, and decorated by paintings that depicted such scenes of love and joy and health as I have never before seen. Just as the paintings at the Hall of Symbols held forth that invitation to join in the elevation of the race, so did these paintings show the way to participation in love and joy.

The dance had already begun and we joined the throng on the floor. Almost instantly I was aware of the influence of stimulating electromagnetic frequencies. I felt the flow of ead of appropriate attunements; my nerve cells responded in a thrilling fashion.

The stimulating rays strongly ionized

¹⁶ The Atlans, Mr. Shaver reveals, were ever youthful, and never ceased growing. There was no such thing as "maturity" in the sense that growth stopped. Thus, an Atlan's age could be determined to a certain extent by his size. Many of them reached tremendous stature, sometimes as much as 400 feet, and heights of 40 feet and more were rather common. Mr. Shaver refers to "ancient" books which have been destroyed, which contained a great deal of Atlan knowledge and history, but points to references in the Bible such as "In those days there were giants in the Earth" as actual truth, recorded memory of the Atlans. Especially significant is the definite statement "in the Earth" and not on it! The Atlans, by the use of their wonderful machines, kept their bodies constantly supplied with a sufficient amount of ead (the energy ash from which all matter is formed by condensation) so that their growth never stopped, but their bodies grew ever larger and heavier. Health itself was determined by weight; a healthy person was heavy. If he became ill, he lost weight. Illness is the inability of the body to fully utilize the available ead, or is the result of an insufficient quantity of ead.—Ed.

the air of the hall; making it extremely conductive to the electric pressure of the body aura, so that the dancers were intensely aware of each other. The consequently augmented vital aura of the cell pollen permeated the hall. It was absorbed by my body, and by that of lovely, faun-legged Arl snuggled in my arms, and by all the young, ecstatic bodies of those who danced about us. Under the stimulus, we wove intricate patterns on the gleaming floor; and the odor music of the Atlans wove into the sound music many scent accompaniments. These scents are of the most penetrative and nutrient of all the food chemicals, feeding the nerves as they are driven into the body by strong sound waves of a penetrative frequency.

In the enhanced delight of the dance I was oblivious of all but the bundle of vitality to which my pulse and soul were synchronized, and my arms held Arl as a treasure beyond value.

Then, as I lost myself in pleasure, it happened. The madness of the fear that was upon Tean City struck; and for the first time in my life I knew the true meaning of terror!

ARL screamed, and pushing me from her, pointed to the edge of the dance floor. There the great shoulders of a horned son of a Titan hunched, one big hand clutching in desperate agony at the folds of a diape, the other pointing up and out to indicate the path of the ray that played upon him. Even in the face of death his only thought was to tell what he knew of the fear; and to point out its direction so that the technicians might answer with a ray of their own.

But nothing checked the ray; and I realized that contrary to all the usual rules there was no guard ray on duty. No wonder there was fear in Atlan! Slowly the huge youth's face turned

black, his legs buckled, he fell, and rolled over on his back, tongue protruding and eyes staring. He was dead.

His friends rushed to him, but the deadly ray had not ceased. It played first on one figure and then on another; each victim rolling in turn to the floor, face black with death.

"By the Elder Gods!" I swore to myself at the realization that no guard ray was going to protect us. "It is true; our perfect government is not so perfect after all!"

I stood as though oblivious to the fact that death might strike my way too. I could only look and rage within me at the death that played about the recently joy-filled hall. Within me the stimulating rays still caused an elation, but it was submerged beneath the surge of wrath that made my blood hot.

Arl was tugging at my elbow, the canny will to live of the female evident on her face in an expression of anxiety and calculation. Together we left the hall, taking a route along which her clicking hooves led me. We kept with a group of young Atlans who walked, without panic or the impulse to run, toward the parked rollats. I knew why; they feared to attract a spy-ray to themselves.

Arl's fingers pressed, warningly on my arm, and I heard her whisper, her voice low, casual. An excited tone might have attracted the curiosity of the mad mind behind the black deaths, who must even now be surveying the scene of his mad acts of killing in grisly satisfaction.

"Listen to that man just behind us—"

I LISTENED. His voice was also casual—held no excited note. In his voice was the cultured note that was evidence of one who has absorbed much of the vast education obtain-

able in Tean City, "—also heard that what lies behind the fear and death here is the mad wish of certain rodite to appropriate the whole fleet of ships prepared for the migration and go to the new sun leaving nothing behind alive with brains enough to build and fly ships in pursuit. Thus they would have the new sun's clean light entirely for themselves and their future seed."

A selfish thing, indeed! But more mad than selfish. Such a view could only be the result of detrimental err.

The speaker went on. "We, the mediocro, know how fecund life can be, but we also know the madness of refusing all of the normal units of life's fabric the right to existence and growth. No social fabric can be built of dull and lifeless robots which are so besotted with detrimental energy that they refuse the least of the units of the fabric their right to growth and intelligence. Therein lies the strength of the social fabric—the unit's realization of its own self and its place in the whole. The whole basis of a fuller life is the acquisition by mutual effort, the backing on which is woven the social pattern of the fabric itself."

I heard another voice, answering in agreement, yet with a troubled note evident in its tones, as if the speaker felt that agreement alone was not enough; that simply denouncing a thing that was as evil as this would not be enough. "Yes, this murderous effort is doomed to failure. The intelligent members of the guilty rodite must realize that such murder of the normal life unit is the refusal of their own right to share in the fruits of the social project. They must realize that such men as the Titan youth they killed have a potential value as great as their own."

Another voice chimed in. "Then why is it refused recognition? If they are

intelligent, then why do they act so detrimentally? It must occur to them soon, or it will be too late."

"Unless they are all mad," said the first speaker. "The sane unit of such a project will see that the basic unit right is inherent to their own success, and realize that destroying those rights will wreck their own plans. The only thing it can be is the explanation a Titan growth technicon offered—that some rodite have been detrimentally charged by disintegrant coil leaks . . ."

I COULD not help breaking into the conversation.

"That is right! The thing has been explained to me that way; as a detrimental hypnosis in which the ego—or self-will—the self recognition of the mind centers confuses its self-originated impulses with the exterior-originated detrimental impulses to destroy. Such a condition is called dere,¹⁷ or detri-

¹⁷Pressed for a more complete explanation, Mr. Shaver has defined "dere" for us:

"Long ago it happened that certain (underground) cities were abandoned and into these cities stole many wild mortals to live. At first they were normal people, though on a lower intelligence plane; and ignorant due to lack of proper education. It was inevitable that certain inhabitants of the culture forests lose themselves and escape proper development; and some of them are of faulty development. But due to their improper handling of the life-force and ray apparatus in the abandoned cities, these apparatus became harmful in effect. They simply did not realize that the ray filters of the ray mechanisms must be changed and much of the conductive metal renewed regularly. If such renewals are not made, the apparatus collects in itself—in its metal—a disintegrant particle which gradually turns its beneficial qualities into strangely harmful ones.

"These ignorant people learned to play with these things, but not to renew them; so gradually they were mentally impregnated with the persistently disintegrative particles. This habituates the creature's mind, its mental movements, to being overwhelmed by detrimental, evil force flows which in time produce a creature whose every reaction in thought is dominated by a detrimental will. So it is that these wild people, living in the same rooms with degenerating force generators, in time become dere, which is short for detrimental energy robot. (Concluded on next page)

mental energy robotism. The thing is simple enough, but I cannot understand how it could happen here in Tean City, where perfection in romantics is so old. Such an occurrence is guarded against by many battle ro, by great organic battery brains raised for just that purpose. How could it happen?"

The two Titans looked at me and shook their heads. They knew as little as I how it could be.

"Well, it couldn't, but it did!" Arl said with feminine logic, and taking me by the arm, led the way to a rollat. In a moment we were speeding away from the dangerous area. Beside me Arl relaxed with a sigh, and I felt her trembling with reaction.

I put an arm around her. "Brave girl," I whispered.

We were soon nearing Arl's apartment, and looking down at her fresh, young face, I felt a wave of worry pass through me.

"I wish we were under that new sun right now; on those fresh-born planets of life with clean new coordinating mechanisms under rodite we our-

"When this process has gone on long enough, a race of dero is produced whose every thought movement is concluded with the decision to kill. They will instantly kill or torture anyone whom they contact unless they are extremely familiar with them and fear them. That is why they do not instantly kill each other—because being raised together, the part of their brain that functions has learned very early to recognize as friend or heartily to fear the members of their own group. They recognize no other living thing as friend; to a dero all new things are enemy.

"To define: A dero is a man who responds mentally to his impulse more readily than to his own impulses. When a dero has used old, defective apparatus full of his particle accumulations, they become so degenerate that they are able to think only when a machine is operating and they are using it; otherwise they are idiot. When they reach this stage they are known as 'ray' (A Lemurian word not to be confused with ray as it is used in English). Translated, ray means 'dangerous or detrimental energy animal'. Ray is also used to mean a soldier—one of those who handle beam weapons (note how the ancient meaning has come into our modern word)."—Ed

selves selected and could therefore trust. I fear that the migration has been too long delayed—the old sun's disintegrant pressure upon the unseen base of our life is now too great for anything else to happen than what happened tonight. Can we help to strive against this immense err, deep-seated in the control minds about us as it must be; or must we flee at once, before they make impossible our flight, thinking of it as a danger of tale bearing?"

But Arl's lips were on mine as the rollat slowed before her home, an effective quietus to my dangerous words, and my mind no longer dwelt on the fear—nor imagined the embrace of a six-armed giant Sybil female or the crushing coils of a snake woman about me!—for it was too busy recording the ecstatic sensations of the intense vital charge the faun-legged girl threw into her embrace. My mind gave up its worry in Arl's soft contact.

THE next day I entered the classroom and found it empty. I went to the incubation laboratory and found several other early students standing there in silent consternation, the fear welling up almost to openness in their eyes. The Titan was not present, nor were any of his attendants. Some of the embryos were dead, others half-smothered; because no attendant had turned on the filtered, enriched air tanks which kept their nutrient fluid supply aerated. I started toward them, but a young son of a Titan stopped me.

"I turned them on," he said in low, evenly-measured tones.

"Where is the Titan?" I asked.

"No one knows," was the answer I got from all.

Other students came in now, among them Arl. She came to my side, but remained silent, troubled.

We waited a short time. Then a

student called tutor center, to inquire. He turned to us with a peculiar look in his eyes.

"They say he is ill!"

"Ill?" The exclaimed question burst from all of us. In Atlan this was startling. Illness is almost unheard of; a rarity existent only on the space frontiers where new varieties of germs were sometimes troublesome.

The news brought Arl close to me, her silky-furred tail trembling as shudders shook her slim body. "Mutan, I am afraid," she whispered.

Her fear transmitted itself to me, and the thought came into my mind that this room was not safe. The same thought obviously had come to the others, because our movement toward the exit was as though by mutual accord. There was obviously some awful connection between the black deaths and the Titan's strange non-appearance. Yesterday the Titan had said a guard ray was on while he spoke to us so gravely of the fear—Had that guard ray been no guard at all? Had those evil rodite penetrated the guard ray, heard his words, known the Titan as a menace to their plan?

The class was dismissed—this time by fear!

And somehow I knew that the thought in my mind was in the mind of all. We had the same knowledge the Titan had. We were in the same danger. We were marked for disappearance, illness, or the black death! We must flee, now or never!

PROOF of the thoughts of the others came almost instantly. As we trooped in assumed light-heartedness down the tunnel toward the rollat ways one of the accompanying youths proposed a picnic in the forest to celebrate the unexpected holiday. He said it loudly in a gay voice, and the others

chorused their delighted approval, a delight that Arl and I feigned too. All fell in with the project, the unspoken desire to flee the city strong in our breasts, our anticipation of being together among the trees, which subterranean dwellers seldom see, strong too.

I raced ahead with Arl, shouting gaily. "Let me lead you to the elevators." There was meaning in my voice, and intent in my mind. I was not forgetting my promise to my friend, the control-man.

We reached the shaft that led to Sub Atlan, from which we would take another lift to surface Mu. There, as we shot upward, I whispered the news to the control-man. "The terror is loose in Tean City," I concluded. "Escape as soon as you can. If at all possible, beg off from another descent and be away. There is great danger for all whom they suspect are aware of them."

He retained a straight face, but I could see the concern in his eyes, and the determination to make good his escape also.

As we lolled in apparent ease on the soft sod of the culture forest, the traditional empty glass made its appearance in the circle. No one spoke of it, but its significant reminder of death's clutch was a constant thing in my mind. Never had fear and death been a part of my thought before; but that empty goblet with its sweetly spiraling stem uppermost was no longer just tradition, but now had a meaning almost immense. What to do to avoid that damnable mechanical play of detrimental force from the mind of some unknown rodite, staring through the viewplates of his defective, detrimentally hypnotic mechanism, seeking to destroy the best first?¹⁸ If they thought we were escaping they would seek us out and snatch us back.

I sat and mused. "Simple magnetics; yet such mighty minds as the Atlans fall before it. We must be clever . . ." I went on thinking of it; but again recurred the regret of last night. If only the migration had taken place a few years ago! But perhaps it had been so planned; and delayed? Delayed by the black death which had thus far struck so secretly and silently. The plan of the rodite must be near completion or their secrecy would have been maintained.

And then, as I sat there, an idea presented itself. I knew a way to escape, and I spoke quickly before my thoughts were clear enough for any unseen listener to read—

"Let us all charter a space ship and take a look at Mother Mu from above! There is no greater thrill than that to cap the day!"

As one we leaped to our feet. I knew then that our thoughts had been very similar; I had only been the first to express the next step in spoken words.

"We will have to take a shuttle ship first," said a young Titan quickly. "Come, I know the way."

CHAPTER IV

Escape Into Space

ACCUSTOMED as I had become to variform life, we presented a strange, almost fearsome appearing company to my eyes as we made our way toward the shuttle ship station. There was young Halftan, of Venusian blood, long-legged, web-footed and fingered, his eyes huge and faceted;

¹⁸ Just as lightning strikes the highest point, so does detrimental force seek the most active and the healthiest first—they are most attractive. The detrimental is only a film over an integrative ion, which is attracted first to the most integrant bodies near. This holds true in thought movements also—thus a dero strikes at the best first.—Ed.

his mate, a girl of Mu except that some forebear had given the line four arms, probably under the stimulus of mutation rays because the family pursuit of making instruments was one where twice the number of fingers could well be used; Horton, a young fellow of mixed bloods, older than the rest of us, quiet, but long-eared and sharp-nosed—a listening fox; his girl, a thin, gray, transparent-skinned maid of Mars, fragile and lovely, her large, leaf-green eyes lighting devoted friendship wherever they rested; two young Titan sisters, their horns just sprouting from under their curls, their great bodies new-budding into womanhood; their two escorts, of the Elder's special creation, large-headed youths of tremendous intelligence, their hands double-length, their necks and shoulders by far stronger than normal to carry their great heads easily, and finally a young Titan male, accompanied by his friend who was a distant cousin of my own Arl and whose sprightly, colorful femininity hinted that Arl's family must be especially noted for their beauty.

Together we made up a company of twelve life-forms of great diversity; and yet all of us citizens of Atlan; citizens apparently on an outing, now bound for a gay adventure to end a holiday's festivities in the supreme thrill, a sight-seeing trip into space.

We dared not think of our true purpose; and I knew that at least the two Elder escorts were aware of what had brewed in my mind and would back me up when the time came. We thought only of our coming adventure, and tried to feel the delight of it so that even our emotions would register true to any spying telcray that sought us out to check on our motives.

The shuttle ship we boarded was a small, bullet-shaped plane containing little but a cabin, air-making equip-

ment and a small fuel compartment in the rear. This plane was not a space ship, but only a sort of hullet to be shot from the surface of Mu to the large station ship of great weight which circled in its own orbit, just as the moon circles the earth forever.

To get the shuttle ship on its way gravity was neutralized by an upward beam of semi-penetrative force traveling at light speed which was turned on gradually until the car just floated in its cradle under the effect of the reverse friction to gravity of the force blast passing through the car.¹⁹

WHEN the weight of the car was thus reduced to less than a pound, I turned on the rocket blasts very gradually and traveled up the reverse gravity beam by instrument. In thirty minutes we were circling the huge station ship as though we were in our turn its satellite just as it was a satellite of earth. With vernier rocket blasts, about the size of toy pistol explosions, the nearly weightless plane approached a landing. Above us spread the world we had just left, making an imposing sight as we settled into a cradle atop the space station.

When we stepped from the shuttle ship at the edge of the oval landing area, we saw several globe-bodied moon-men hustling about their own type of shuttle plane, a long, wingless splinter constructed of a very fragile and glass-like substance. Although I feared to think upon it, the moon was my next destination. One thing that

all of us knew was that we never intended to return to earth. The blackened face of that son of the Titans, the noblest blood in Tean City, as he lay dying on the dance floor rose before me to tell me flight was not only best, but the only course for us.

In spite of myself my eyes roved over the black dome of space, searching for the lights that might indicate a pursuing craft. It seemed almost impossible that we were fooling the mad rodite and their spying telepath rays. In spite of all self-imposed mental guards, my mind seemed intent on shrieking "Escape! Escape!" through every possible loophole in my concentration.

I engaged the gnome-like moon-men in conversation in an attempt to still further blanket my turbulent mind. Arl caught my eye and wagged her tail in cheerful encouragement, seeming to divine what was on my mind. How expressive that beautiful tail of hers was; how much it could say; and with no dangerous thought waves to betray its meaning to those who must not receive register on their sensitive instruments. With that tail, no language, no thought-transference was needed!

But even if pursuit developed, I had one trick up my sleeve. I dared not think of it, or some watching rodite informer might advise any pursuers of my plans and a way to circumvent them would be devised.

It struck me that not all of the rodite might know of recent conditions and developments in Tean City. Nothing had been announced on the tele-screen news. Thus, while we were escaping, others ought to know the truth, and certainly not all the rodite were disinfected. They would not report what they read in my mind, and the rodite who knew would not attach special significance to others who knew; and

¹⁹ Mutan Mion explains that gravity is the friction of condensing exd, ex-disintegration, falling through matter into earth. By using a beam of similarly condensing particles of ex-disintegration a harmless beam of upward gravity is obtained which can levitate matter slowly or drive it upward at immense speed. All space is filled with the ash from disintegration of the suns of the universe. This, condensing again into matter, is inter-gravity or gravity.—Ed.

the very fact that it was thought about in an unguarded way might cause them to dismiss us as of immediate danger, and thus blanket our intent to escape.

I thought of the dance, of the sudden striking of the black death on the dance floor, of my puzzlement as to what it might mean. I thought of the disappearance of our tutor technician, wondered if he too were murdered. Any sub-rodite, getting a register of my thoughts, would certainly ponder the meaning of the unbelievable existence in center Mu of murder; murder whose actuality he could not doubt, because it would come to him as the unguarded and therefore true thought of a ro such as I was.

IN double-quick time, still acting out our enthusiasm for an unexpected holiday, we chartered a fast space ship for an hour's time. An attendant led us to a cradle on the landing stage; and we entered the ship gaily.

The speedster rose slowly up the lifter beam under my control and when it was clear of the station ship I sent it hurtling outward.

When we were well out of sight of the station ship and picking up speed toward the moon I gave up thinking of our trip as a sight-seeing outing which was to proceed only a little way into space and then return, but began to think of the moon as our destination, meanwhile setting the auto-pilot destination needle on Venus. Then I pulled the throttle back to full on.

If what we had heard of the black death were true, it might well be that no space ships were allowed to leave the vicinity of Mu at all. Just the mere fact that we were hurtling straight away might have placed even more suspicion on our purpose if we maintained our original thought-fabrication. With the moon now our revealed destination, our

true purpose was still veiled.

I switched on the electrically magnifying scope screen to the rear to look for possible pursuit. The scope had a screen of microscopic photo-cells which turned the tiniest light ray into an electrical impulse which was greatly augmented by vacuum tubes and the resulting impulse made a much larger cell on a viewplate glow strongly, giving a vivid image in half-tone.

Far behind us a craft sped along. Was it in pursuit? I watched it for long minutes, but there was no way of telling. It maintained its distance and its course. In a very short time their instruments could check our course, and if they were pursuing us, they would be unable to correlate it with my mental image of the moon as our destination; and they would be after us instantly. If they were merely harmless travelers to Venus, there would be no questioning of our own course.

I gave them time to check us with instruments, then I set the course pointer on Mercury, a planet almost never visited, and watched closely. The strange craft veered.

"They are on our trail," I said. The words broke a silence that had become almost intense.

Arl's cousin looked shocked. "Then we can't escape," she said. "They have a mechanical advantage over us."

ONE of the big-heads was eyeing me shrewdly. "You have a plan," he said. It was a plain statement of fact, not a question. It was though he did not ask what was my plan, but expected me to put one into operation now that the crucial moment had come.

"Yes," I agreed. "Now is the time to play my one card. I hope that it will be an ace."

"We have not asked nor even wondered about your plan once we ob-

served that you had one," said the other big-head. "But now the time for secrecy is at an end. It is unnecessary. If we cannot escape, our intent to do so will be useless to hkle; if we can escape, our intent will not need to be hidden."

"True enough. And I will be more than glad to relieve my mind of the strain of withholding what is in it," I said. "I am but a ro youth, and the task has been hard."

"But one that you have done well," observed the young Titan gravely.

I accepted the compliment with a thrill of pride. Praise from a Titan was something to which I was not accustomed—indeed, old Artan Gro had many times given me exactly the opposite.

"It is a matter of mechanics," I explained. "And the one thing I will be forced to blank out of your mind as I do it. I warn you all not to think on the matter when you see it performed. As to my plan of escape—I have an even greater one. I will explain fully in a very short while—we will go to one of the sunless Elder stations on a cold planet. The nearest of these is Quanto, on the very rim of this solar system."

"A good choice," approved the big-heads. "But one that rouses our curiosity in your 'mechanical trick' to a high pitch. Obviously you know that Quanto is seventeen and one-third billion miles away."²⁰

I could almost read their minds. "Yes. Weeks away at the speed of this ship—and we have no food."

Even Arl's tail stopped wagging at that—but only momentarily. In her eyes I read that confidence I knew she

had in me; a confidence that she herself felt was justified.

"Your plan!" she reminded me. "Now we know you have a definite one, for if you are aware of the fact we have no food, you must also be aware of a way to reach Quanto without it."

"Such great faith must be well placed," murmured one of the Titan maids. "I, too, can have no fear now that you have a plan."

I proceeded now about the thing I had in mind, taking care not to think of what I was doing, but think, rather of the appearance of my hands as they worked, of the movements of my knuckles, of the muscles that caused those movements, of the nerves that carried the messages to the muscles. . . .

It was a good thing for me now that I had listened so worshipfully to space pilots when I was younger; some of their adventures were going to stand me in good use. Auto-pilot mechanisms on these space ships were adjusted to a fool-proof speed, so that no speed-mad citizen could wreck a shipload of people. There was a stiff spring on the throttle, just a little stronger than a man's arm, which held the fuel flow to a safe maximum.

I found the case of the auto pilot locked and the key was naturally not aboard the ship, but kept by the attendant back at the satellite ship. But I found a way around that. I took the belts from several of my companions in spite of their puzzled faces and fastened them into one strong line. One end went around the throttle bar and with another I took a turn around a seat arm.

A dozen strong Atlan arms pulled the belt line taut at my bidding, and I took in all the slack at the seat arm. Back came the throttle bar. The acceleration of the ship spilled them all in a heap at the rear, but I held fast to the line and

²⁰ Marten Mion says this is the eleventh and last planet of the solar system. The tenth (and yet undiscovered, though predicted by astronomers) is two billion miles beyond Pluto, which is itself nearly four billion miles from the sun.—Ed.

the bar stayed back.

NOW our safety depended on whether the pursuing crew knew this simple trick—for many of the pleasure craft, which our pursuer plainly was, were as well powered as the police craft, although their autopilots restricted them to a much lower speed. If the pursuing craft's pilot did not think of adding other men's power to the strength of his own hand on the throttle bar, he would never overtake me. Even police craft were set to less than maximum motive power, as the tubes burned out too quickly at full blast.

I watched the dark speck on the rear screen anxiously and slowly it grew smaller and smaller. When it had vanished the youthful Titan pounded me on the back until my ears rang and my knees buckled.

"You're a sly fellow, and your whole plan of escape is right. It's high time we ran away from the black death. I've worried and waited for it to strike me long enough. The Elder station on the cold planet are the best natured men you can find in space. Haven't been near a sun in centuries, and don't know the meaning of the word evil!"

He turned to the others and continued speaking eagerly. "They'll take us in, give us entrance cards to any government in space. . . . Personally I would choose some civilization that warms its cities with its own fires, and shuns all suns entirely. I've had enough worry waiting for Atlan's rulers to get wise to the danger and move. I want no more of these sun-bitten zany dero around me!"

The gray Martian maid spoke, her sensitive green eyes shining with admiration, her voice the slow singing speech of Mars—

"The best thing you did was not to tell us what you had in mind, for some-

one would have read our minds as surely as Venus loves us. We have lived in dread and indecision for many moons. The black death has struck day after day and no official word of it. No one can tell who is dead; there is no way to tell if anything is being done about the danger or not, for anyone who made the slightest effort to do so disappeared at once just as our loved teacher did. We all know that he was not ill; and we also all know that the day he made that announcement to us he had signed his own death warrant—but he had evidently decided he must, as no one else seemed to move. It has been terrible, and if you had planned this flight with us we would never have gotten away. We have been very lucky to get this far. Now, if you will take my advice, you will go at once far beyond any influence from Mother Mu's rodite, under another space-group of planets, and there we will learn how to live where such things as the black death do not exist."

The smile she bestowed on me was Martian magic.

IT must have been the look on my face that prevented any further remarks by my companions, and caused them to look at me in new curiosity. If so, my next words fanned the flame of that curiosity.

"I spoke of a greater plan, a few moments ago," I said. "And I am afraid it does not call for such conclusions as you two have made. I am sorry, but neither of you have given me any advice that I like, as sound as it may seem."

"Speak on," prodded one of the big-heads, his eyes alight with interest.

I checked our course briefly to make sure we were headed for Quanto correctly before I answered him. Then I made myself comfortable in a cushioned

sent and faced them.

"What is it that we have been fleeing?" I asked.

"Basically, an aging sun," said the young Titan reflectively. "The black death is merely a result of detrimental action on certain rodite who have become dero and even ray. We have fled from them, but the real cause of our flight is the sun."

"Do we flee as cowards, deserting our comrades?" I asked softly. "Or do we flee only that we may be able to make a new plan to take the place of the one that has been interrupted by the rodite dero?"

There was a wry smile on the face of the big-head. "The day has come," he said, "when I have seen a ro put a Titan to shame! Of course, Mutan, we do not flee for cowardice, but to gain time and life to put up a fight. It is only that we have not thought it out as you have. Nor has inspiration as yet given us such a plan."

"Then listen to mine," I said. "Just as it is with you, my first thoughts at realization of the fear that lay in Tean City were those of escape to a place where there was no fear. It is a natural reaction, especially if that possibility suddenly presents itself.

"Let us analyze the fear. First, the top unit of the force behind the black death must be a man in a very strong position, to stall off the whole migration as has obviously been done, and to control things so that no news leaks out about the terror that is otherwise so plain for many to see. So high and powerful must this man be that to fight against him on Mu itself must be to invite certain defeat. Perhaps even if we were to muster all clean-minded Atlans to the battle, we could meet only the same frustration as the migration plan has suffered—for is it not true that all Atlans who are aware of the danger of

the sun's evil have made utmost effort to bring about the migration?"

"True enough," said a Titan maid. "No Titan has been unaware of the danger, and lately, even such ro as you have been brought into the plan. Perhaps it is fitting that the salvation of that plan come from the mind of a ro."

"THEN here is the only salvation I can see," I said. "We must go to the Elders of Quanto. Through them we must contact the mightiest of the Titans and from them get advice and assistance. This thing may well become a space war before we are through—and as I see it, it must be so, or all the Atlans of Mu will be lost!"

I looked at Arl, to see if she listened, and she wagged her tail roguishly. Not only was she listening; she was thinking in tempo with me. At my glance her voice chimed in, doing things to my spine.

"Yes, and we ourselves must devote ourselves to the task, and go to a place where the growth rate is unlimited by law, so that we can become more equal to the job. It will take great power to displace the mad rodite. On Quanto we must find some mighty and old and wise technicon to go along and assure us of a hearing; otherwise the power will not be given to us. We need the very mightiest power the Elders of space can give us to save the people of Mu."

"If you but wag that tail of yours at them, Arl, they will give it to us!" I laughed because I could see in all those around me the same conviction and devotion to my plan that was in her. The youthful company laughed too. "Of that there can be no doubt," they agreed, whereupon Arl swished her tail before them and pirouetted about on her clicking hooves.

In that instant the fear was gone

from our minds. Instead we were filled with gaiety and hope, and great determination to do all that lay in our power to end all fear.

We circled Mercury, straightening out on a direct path for Quanto, constantly accelerating until it was unnecessary to explain why lack of food did not worry me. The young Titan remarked: "We will be at Quanto within twenty-four hours. Already our speed is approaching that of light."²¹

On Quanto, we knew, a group of Elder technicians from sunless Nor, a group of sunless planets 0.16 light years away, had lately established an observatory for the study of our planetary system.²² It was these Elders I wished to contact in my effort to enlist aid for

our cause.

Our trip to Quanto consumed slightly over twenty-four hours, the hunger of which we could easily endure; and on the landing station we switched to a shuttle ship.

As we settled into the cradles of the great cavern's entrance on tiny Quanto, liquid air glistened over the view panes. The ship rocked as the cradle connected with its conveyor and was drawn by it into the cave through the air locks. At last we were in the home of the kindly men from sunless Nor!

I leaned back with a sigh of thankfulness, feeling that I had saved at least some of the good life seed of ancient Atlan from the madness that was overtaking all of its races under the aging

²¹ Mutan Mion, apparently, holds no brief for the "limit velocity" of light; or that the speed of light is the ultimate speed. According to Mr. Shaver's letters on the subject: "Light speed is due to 'escape velocity' on the sun, which is not large. This speed is a constant to our measurement because the friction of exd, which fills all space, holds down any increase unless there is more impetus. The escape velocity of light from a vaster sun than ours is higher, but once again exd slows the light speed down to its constant by friction, so that when it reaches the vicinity of our sun, no appreciable difference is to be noted. A body can travel at many times the exd constant, under additional impetus, such as rocket explosions. A ship whose weight is reduced to a very little by reverse gravity beams can attain a great speed with a very small rocket. Once beyond the limits of matter gravity ceases and the ship becomes weightless. Speeds over that of exd constant must be under constant impetus, for the friction slows them down quickly again, especially so in the case of solids. Sound, as an example, travels through air at a constant speed—and yet the impetus is obviously different in each case! The only conclusion is that the air itself is the governing factor in the speed of sound, which always remains appreciably the same. So it is with light. Both depend for their velocity on an initial impetus. Both remain constant because below a certain speed, friction disappears."

Your editors have been constantly amazed at the interchangeability of Mr. Shaver's (Mutan Mion's?) physical phenomena, or rather, their adaptability to one great physical law which we have as yet hardly begun to comprehend in its entirety. However, at this point a brief definition might aid the reader in understanding many things he has already read and will read in the following

pages.

Matter in all the cosmos is constantly disintegrating and integrating. There is the natural parallel as to whether the hen or the egg came first—did the integration come first, or the disintegration? But that is the one and only unanswerable question in the whole theory. Exd is the ash (matter so finely divided as to become energy rather than matter) of disintegrating suns. It spreads out and fills all space. Then, perhaps because of the presence of an actual bit of matter (as in the case of the salt grain in the salt solution that commences precipitation which does not end until all the salt is once more in its original form), or under the influence of a magnetic field which draws the exd together, integration commences and the exd once more becomes matter. This fall of exd and its condensation is what causes gravity. When Newton was hit on the head by an apple, it was by an apple that was *pushed* down upon his head, rather than *pulled* down; since gravity is the friction caused by the fall through matter already existent of condensing exd. Obviously a condensation is a falling together of a finely divided element into a grosser state.

There are many finer points, staggering in their implications, concerning this theory which are not necessary to the reader's understanding of this manuscript; but they are being prepared in a monograph which is to be submitted to scientific circles.—Ed.

²² Quanto lies beyond the jurisdiction of Mu's government, which holds sway over all the planets of the solar system except this tiny world. Quanto is on the rim of Nor influence and is used by them as an observation station. Because of its small size, it is unimportant to the government of Mu.—Ed.

sun. To save still more would be a colossal effort; but as Arl's arms drew about my shoulders, I knew that such effort was worthwhile.

The purpose of life was plainer now. Such beauty and tenderness did not live in words or in paintings. Only in understanding and caring for the life seed, the bearers of future race growth, could a man find the true meaning of life. And in the mighty job that lay ahead in enlisting aid for the saving of our people from the black death of the mad rodite I knew I would become a man or die.

CHAPTER V

The Princess Vanua

WE found the typical welcome that all the great ones accord to visitors. Our party was courteously received by the attendants, and we were directed to the administrative offices with swift efficiency.

For me, this first visit to a world peopled by other than Atlans or Titans was one of the most interesting of my life; but I did not find it half as exciting as my first glimpse of Tean City had been. The men from sunless Nor were of an amazing blondness, for no light but of their own making had ever struck their skins. Their size, as did that of Titans and Atlans, varied with their age and with the age of the parent. Thus, a son of a man of a hundred years age would be three times the size of a son of a man of thirty.²³

Further, the race from Nor, who are called Nortans, are a straight race of men. There had been no intermingling of races of other forms, not because it was forbidden, but because their technicians had not made the variform technique of breeding available to the public and without it all such intercourse is sterile. Perhaps they are right, although I see much beauty in variforms—especially in my own lovely and completely desirable Arl with her beautiful, expressive furry tail and her dainty, clicking hooves; certainly their race is beautiful and vital enough to please anyone.

All about the city of the Nortans it was evidenced by many wholly unfamiliar devices that the science of Nor had forged ahead of our own; and as I looked about, I knew why. Here was none of the fear that had pervaded Tean City; nor was there any of the sun-poison to be a detriment to constructive thinking in even the slight degree that evidently has long deterred the technicians of Mu from full scientific advancement.

The thought of the fear brought the need for haste once more home to me as we walked through the city toward the administrative buildings. It was better to continue our flight than to remain long even here, I knew. So, to improve time, I kept running over in my mind the desperate plight of center Mu; the delaying of the migration to a new-born sun; the fear of pursuit that was still with us; for I knew that in that administrative building toward which

²³Proportionately this would not be true. A man of a hundred considering he did not stop growing at the usual age, would certainly not be three times as large as at thirty. A baby doubles its weight in six months, doubles it again in eighteen. Thus the rate decreases in proportion to total mass, although the actual poundage increase is the same for a similar period of time. Later, however, the poundage begins to lessen until maturity is

reached, where growth ceases altogether. In the time of Mutan Mien, however, growth was a constant thing, ended only by death. And the rate of growth could even be increased, if desired. This is what Arl was referring to when she mentioned that it would be necessary to "grow" to be able better to perform their mission. The reader will see the methods of this stimulated growth demonstrated further on in this manuscript.—Ed.

we were headed some watchful Elder of Nor was most certainly taking thought record of our minds, to see if there were harm in us.

So, when we reached our destination, it instantly became evident that we would have little explaining left to do. And at the same time, another thing became evident to me that filled me with terror. Fear, again, in the one place where I had thought I would not find it!

A YOUNG lady of the snowskinned Nortan race glided toward me, her hand outstretched in greeting, her voice a soft bell of welcome for all of us.

"We have read your thoughts and understand what brings you here. Follow me now to the princess Vanue, chief Elder, for an oral check; and forget your fear, for soon you will be going to where fear is not. Your message spells danger to us, as well as to your poor, helpless fellows in Mu."²⁴

It had been the words "princess Vanue, chief Elder" that had struck a new kind of fear into me. The chief Elders had been described to me in Tean City. They are the oldest of the race, and are given official power according to the value of their achievements to the race. They are of both sexes, and have learned all there is to know of the secrets of growth; how to manufacture their own life-supporting essences, nutrients and beneficial vibrants. And on their ability to improve upon the standard nutrients of the people often depends their success. Thus, when a simple ro like myself

²⁴ The Nortans, as did the Atlans and Titans, spoke the universal language of space; a language originated by a Tuan Elder of the far past. The name of the language is Mantong. The original individual language of each race has fallen into disuse as the three races have intermingled through all space. This is the same language of which the alphabetical key was published in the January 1944 issue of AMAZING STORIES.—Ed.

comes near one of these Elders, his will becomes their will automatically; for it is overcome by the great, all-pervading force of the life within them. One hardly notices this when the Elder is of the same sex, but when that life force is of the opposite sex the attraction is so great as to be irresistible. So true is this that seldom is a ro of one sex allowed too near an Elder of the opposite sex; for never again would the poor ro free himself of love for the Elder.

My spirit trembled when I knew the Elder to which we were being taken was a woman; a woman who for unknown centuries had absorbed all the essences of growth-promoting substances. And too, Nor was a place where growth science must be far, far ahead of our own sun-baked sciencon's achievements. Never would I be able to free myself of the spell that woman-force would cast upon me!

I looked desperately at Arl's sweet face. Never again would I love her if this thing were true. In Arl's eyes I read the same fear, and I knew then that she surely loved me and I was torn by the approaching loss. However, I dimly understood that it must be necessary—for no man near an Elder woman can deny her the truth of love for her.

We left the building and presently were ascending a long, transparent boarding tube into the side of a space liner that lay like a sleeping monster in the launching cradles. This was one ship that could land directly on a planet! But then, Quanto was small. We passed through a series of airlocks, reached the inside of the ship.

It was a long way into the center of the ship. As we progressed, I noted that all the ro who passed were maidens; beautiful white Nor maidens with glittering white-yellow hair that floated about their heads in a cloud, so



We were drawn as by a powerful magnet toward a huge Egare . . .

fine was it that it was air-borne.

Soon I became aware of an aura of complementary forces that I knew came from the Nor Chief Elder, Vanue, whom we were undoubtedly now nearing. Her force scent grew stronger as we approached a mighty door set across a corridor. In glowing letters of hammered metal above this door was the legend:

VANUE

Elder Princess Of Van Of Nor
Chief Of Nor On Quanto

The great door, I discovered was an airlock; to hold in the ionized and nutrient-saturated air of the chamber. These chambers the Elders seldom leave, since all evil is restrained from entering.

AS we passed through the lock, the terrific stimulation of this conductive electrified medium seized us in a mighty ecstasy. We were drawn as by a powerful magnet toward a huge figure which was an intense concentration of all the vitally stimulating qualities that make beauty the sought-for thing that it is.

Within me I could feel the compass of my being swinging toward its new center of attraction. I was no longer myself. I was a part of that mighty being before me. My thought was her thought; I was her until she chose to release me.

Could she release me? I could not even wish it, nor ever would. Within me I knew that, and I felt no resentment, no regret—only joy.

All of eighty feet tall she must have been. She towered over our heads as she arose to greet us, a vast cloud of the glittering hair of the Nor women floating about her head, the sex aura a visible iridescence flashing about her

form.

I yearned toward that vast beauty which was not hidden for in Nor it is considered impolite to conceal the body greatly, being an offense against art and friendship to take beauty out of life. I was impelled madly toward her until I fell on my knees before her, my hands outstretched to touch the gleaming, ultra-living flesh of her feet.

Beside me the other youths from center Mu were in the same condition of ecstatic desire.

As our hands touched her flesh, a terrific charge of body electric flowed into us. We fell face downward in unbearable pleasure on the floor.

She picked us up one by one and placed us on the desk before her. Waist-high now were our burning eyes. She bent to meet our gaze; and the mighty beauty of the eyes of the Elder princess of Nor flashed a question into our minds. As one man we chorused:

"Yes, it is true! Evil has the upper hand in center Mu; in Tean City itself!"

It was then that I realized how far ahead of Mother Mu's Titan and Atlan technicons were the Nortans and, I supposed, all other great ones of the dark worlds. For Vanue wasted no more time on us, but bending toward the banks of instruments before her throne, pulled a lever and through all the ship was heard the warning signal of departure. As if they were my own, I knew her thoughts! Quanto was to be evacuated.

The Nortans were certainly not the sun-spoiled sleepyheads our own race had proved to be. She understood the awful danger that could lie in a planet's multitudes' might under the thumb of the madness of zero.

At her willed command we all ran to seats that circled the throne. They were mounted on acceleration absorbers. The great hand pressed the

bar that lifted the now weightless ship up the force beam flowing out of the cavern.

Even through the thick walls of the ship we heard the huge airlocks scream shut behind us. Then we were out in space headed toward Nor, the vast cold planet where this Elder Goddess' daughter had been born centuries before. I realized that our precipitate departure was sure evidence that our news had meant much more than nothing to Vanue. She had enough Elder God sense in her to know that flight was imperative. There were misgivings in my breast as I wondered if any Atlan Elders or rodite had knowledge of mighty Vanue's presence on Quanto. It might make a great difference if they did!

AS the acceleration lessened toward the midpoint of our takeoff, freeing us from our seats, the whelming voice of the great woman-being swept us.

"You children will remain with me until your future is settled. I will thus be sure that you are fully rewarded for bringing us such vital information."

The soft, singing voice of the gray maid from Mars questioned her, and in its notes was gray also.

"Will you . . . can you . . . then give us back the love of our dear ones, which has cleaved to you?" There was a powerful pleading in her voice that penetrated even through the blanketting ecstasy that held me.

Infinite tenderness and compassion seemed to flow from the eyes of the great one.

"There is a way to do that," the master voice answered; and she bent swiftly toward the Mars maid, her great eyes flashing a strange thought I could not wholly read; a tender woman-language into the eyes of the Mars maid.

That simple Martian magic had made

another friend, this time a great one indeed.

It was a strange passage. Most of it seemed more a dream than reality. Such things as the tremendous gait we built up—far more than light speed—and the great distances we traveled were the realities, but I barely noticed them. More real was the unreality of the thin, lovely forms of the Nor maids moving about their mighty princess, the soft fires of their floating hair like seedling flames from the vast fire of Vanue's god-life crowned by its floating cloud of yellow; our own eyes burning like the spotted wings of moths against the screen of her will; the sad faces of our own maids beside us, gazing first at the fierce white flame of her body and then at our own bemused selves; the vaulting of the vast ship walls about us; the unfamiliar instruments blinking and whirring.

It was a very real dream to me—a dream I knew I would never stop dreaming. Strange passage. . . . Ever the whisper of the feet of the Nor maids on some swift errand; the soft rumble of the voice of their living Goddess and the answering bright song of her worshipping maidens. Yes, it was a strange passage, and every mile of it brought home a fascinating realization.

I had embarked on the most amazing voyage of my whole life. The very thought of what now certainly lay before me was enough to stun my mind into an apathy of thinking that was hard to overcome; yet my mind was so full of excitement that it did strive to think, to add to the realization of what the future would hold. A new life was at hand; opening to wonders that staggered me to think of them—and awed me into all-engulfing reverence.

To live to become what this Nor princess had become; to have the love of people as she had the love of these Nor

maids—that is the real dream. I knew that I must gain the key to the door of a way of living that will lead to the full value of the Nortan life.

SO IT was, sitting in the thrall of that too-strong beauty of woman-life, we noted so little. How much time passed? I will never know. It is as if all body functions ceased, as though food and drink were not needed—as long as we were in the presence of Vanue of Nor. But I did know that she was in continual communication with the planet Nor over the space tele-screens. Face after face appeared before her, murmured briefly and intensely, and vanished; only to be replaced by others. I knew vaguely that she was calling for a conference on the strength of our information; and sensed also that we would attend that conference at her side.

The thought dawned on me slowly. Here was an honor few ro ever attain in the first century of their growth. By old Mother Mu! To see those Elders of Nor, the whole lot of them, male and female, all at once . . . That

would be more than one could well stand. An overpowering, devastating ecstasy. . . .

Well, it would be an interesting death²²

CHAPTER VI

Conclave of the Elders

I NEVER knew how much time the voyage consumed; but it seemed very soon that the great vessel floated down the landing beam into the white and yawning face of a landing area on a station satellite of Nor while I and the other youths dreamed on almost oblivious in the quarters of Vanue.

Still in that dazed dream of love we followed among her maidens into the tubes and aboard the special shuttle ship awaiting her, and shot off to Nor looming not far away. We did not pause on Nor's dark surface, but descended into the depths of a great cave toward the council place somewhere in center Nor.

I had thought in the past that the Titans were mighty of thought and size

²² This reference to death from mere association with the Elders is singularly intriguing. According to Mr. Shaver, the Titans, Atlans and Nortans had the ability to bestow beneficial forces upon less favored mortals, such as Mutan Mion (a ro), and also radiated a perpetual flow of life energy which was beyond their control to cut off from any ro who visited them. Hence, the animal magnetism of Vanue was such as to cause Mutan Mion's whole being to be drawn to her body with a force so great that it superseded any other love he might have had. Her attraction commanded all of his maleness, his ability and capacity for love of the opposite sex.

Now we find him referring to the possibility of dying from too much of this animal magnetism. Obviously in his mind a superstition has been built up which has enhanced his imagination of the effects of meeting the Elders in a great group. He refers to meeting the Elders as being "a great honor" for ro less than a century old. Therefore we can discount his belief that it will be fatal to him; because it is sometimes done to ro younger than a century as an "honor" and without fatal result. The truly interesting factor here is when

we consider Mr. Shaver's constant insistence that dark space is full of Titans, Atlans and Nortans, and that they do not visit our world because it is plagued by the sun's poisonous radioactives and is a cause of death. They shun their ancient home, Mu. We, says Shaver, are a quarantined people under an evil sun. We have no value to them. In their language we are *evred* (detrimental energy animals: E—energy; R—dangerous dis force; AN—animal; T—force of growth. Literally errants are animals whose force of growth is directed by a dangerous dis energy and is therefore evil). Can we assume that he is incorrect in his assumption that these super beings never visit the earth, and that such instances as the biblical references to angels, Christ, and other things are actual records of such visits? Perhaps it is significant that the reference to these things always seem to include effusion of an energy of some sort: i.e. the radiance of the angel who drove Adam and Eve from the Garden; the brilliant light that blinded Saul as he rode to destroy Christians; the radiance amidst which Elja, and Christ himself, ascended into Heaven; the light that came from the burning bush and the voice that spoke to Abraham.—Ed.

—but what I saw now eclipsed anything I had ever heard of the glories of our own races. Big and vital as was Vanue, she was but a little child among the tremendous Nordan Elders and Gods.

There are no words to describe what the development of unchecked growth in man brings forth. These ancient Nordans, who had studied and purified all the source-substances of growth and combined them into an endless variety of nutrients which they introduced into their bodies by many means—borne in electric flows; on penetrative sound waves; by injections; by direct feeding—had been growing at a fierce rate for unknown centuries. Their inner beings had evolved in various ways, so that they were evidently of a more complex atomic and molecular construction than ordinary flesh. There is no way to describe the qualities of thought, of inner strength of spirit seen on their faces and in the aura that visibly coruscates always about such beings.

We trooped after Vanue as she entered the vasty reaches of the council cavern and took her throne by the side of her father, a mighty bulk of man-flesh but only a lesser luminary in that gathering.

Before the council came to the business at hand we were treated to a brief prelude of entertainment—psychologically a reward for the effort of coming to the council. It was a prelude of music and dancing, a review of the best talent of the planet, calculated to bring the minds of the council into harmony on the subject of the welfare and glory of the race. Entertainment, yes; but the amusements of Elder Gods are nothing to pass over.

What it all meant was beyond me; I was aware only of the awful beauty and tremendously feared strength of the dancers—bred and fed by wizard technicians of growth; trained to express

meaning and emotion of a kind too vast for ro to grasp. They danced in a vortex of conductive rays which carried their thought and body essence, augmented by apparatus, to each watcher.

THE climax was the appearance of the greatest beauty of the planet—a sorceress of the art of entertainment named Hypaytee—who wore on her head a device which caused a vast augmentation of the thought images of her mind to play about her body in a tremendous revealment of the infinitely developed soul of woman. I had loved woman—but never before had I understood even vaguely what development did to the greatest value of life. The rewards this woman could give a man by the use of her mind alone, coupled as it was to that mighty, sinuous dancer's body expressing all the things that draw men to women, brought the concourse of Elders to their feet in an earth-shaking applause and a mighty vow to care for the race that produced her. This thought was also projected from the control rays which took root in every heart. It came to me, too; and I was a Nor-man now, no matter what I had been before!

Then Vanue's thought flashed out, setting the thought cloud²⁰ areas into coruscation with an alarm, a command to attention. I was brought out of my daze to see my own thought record projected in the thought clouds. I saw once again, as real as the first time I

²⁰ Three dimensional pictures were formed by projection of the image into a mass of gases held by electric pressure in a cloud whose particles glowed in various colors according to the mental wavelength of the vibration field in which they floated. Ordinarily the cloud is opaque white, and when the thought-picture is projected into it by the Nordan mind, it becomes transparent except for the particles which form the image in full color. The command for attention causes the whole cloud to change color from milky white to flaming red.—Ed.

had seen it, the fear on the faces of the six-armed Sybyl of the Info screens; the striking of the black death at the dance; the hideous fear on the faces of the dancers; Ari's sweet face contorted in a scream. . . .

A thought-record from the brain of each of our group from Tean City followed. It was evidence enough, thus gathered together, that evil had the upper hand in Mu.

My own efforts to conceal my thought as I planned our escape and the trick of the belts on the throttle that had resulted in our success finished the record display.

I was mightily surprised to hear applause and a great thunder of voices calling for me—Mutan Mion of Atlan. They called for me, the stupid artist! those vast voices from hundreds of ancient beings, some of them three hundred feet in height!

Vanne held me out in her two hands for all to see. And as I became the center of their attention, my embarrassment exceeded any emotion of a similar nature I had ever had. If I had known that they would think of an escape from such a condition as so much of a feat it is probable I would never have tried it. I would have been hopeless of success from the very inception of the foolhardy thought.

I was put down again, my face red, my thoughts flustered, my embarrassment a flood of discomfort in me—but a discomfort that held within it a strange glow of humility that was at the same time a glow of pride. I was proud with a just pride; and I felt somehow that it was not my own pride, but the pride of Vanne, whose utter slave I had become. Vanne, Elder of Van of Nor, was proud of her rol

projections in the thought-cloud area. I saw that any thought, no matter how abstract, could be projected in these clouds by thought augmentors.²⁷ They used an image language instead of words, and their talk was to me but a whirlwind of changing forms, faces, geometrical figures, maps of space and figures on orbits and many other things

²⁷ In a letter from Mr. Shaver, this reference to augmentors is explained in great detail. Says Mr. Shaver: "I refer you to a picture printed in many high school books of ancient history. It is from the 'Book of the Dead' a copy of which could be obtained in any large library from a book about the 'Book of the Dead.' This picture shows a scene which is called a picture of the Gods, and is in two sections. On the lower section the Gods are 'weighing the souls' our historians tell us. Actually it looks like a butcher buying a hybrid hog: half hog and half deer . . . the animal has a line around its middle as though it had been cut apart and sewn together again. It is evidence of the hybrid breeding of animals by the Atlans and Titans of Mu.

"Another picture shows a teacher seated before an instrument, and before the teacher, facing him, is a group of students each holding a smaller instrument. This is an actual pictographic representation of the thought augmentor and the focusing device used to pick up its waves.

"Still another instrument pictured in ancient Egyptian glyphs is the crook the Pharaohs always carry. Notice the bottom end has a cleft—with holes. I have seen such handles protruding from the ancient weapon-beam apparatus. It acts as a beam director, like the stick of an airplane; and if removed would have kept the apparatus from being used by anyone else. Why else the cleft on the bottom? The origin of scepters was this carrying of the control handle to keep others from using the dangerous apparatus while one was gone for a short time.

"Certainly the use of this apparatus was very general in ancient times among rulers for it gave them control of men's minds and its use was always secret among them."

Mr. Shaver's explanatory letters to us consistently startle us with new mysteries. His calm assertion that he "has seen such handles protruding from the ancient weapon-beam apparatus" was such a starter. Naturally your editor demanded an explanation—which came in the form of a NEW MANUSCRIPT! This new story tells of Mr. Shaver's amazing search for the underground cities of Atlan—and of his SUCCESS!

Readers, as we edit this present manuscript for publication, we are constantly plagued by the presence on our desk of another which offers what purports to be PROOF of the truth of the story of Mutan Mion!—Ed.

THE actual conference of the God-heads took place now in thought

incomprehensible to me and probably to most of the present. The powerful minds of the Nortans functioned too rapidly for us to grasp any but the simplest meaning in the ideographs unfolding in the cloud before us. But I did gather that some action was to take place at once to save the Atlans and the Titans of Atlan from the derodite.

Now from the mists of the Elder Gods' highest throne of all came a swift ray that lanced down and touched me delicately. An ecstasy of change came over me. What that ray did to me and told me in the next brief instant I can never say in any words. Then a voice spoke out:

"Mutan Mion of Mu, we have seen the great compassion and love for your fellow man that lives in your breast. We admire such greatness in such a tiny ro; and because of the love of man in you we have decided that it must not go without full satisfaction in deed.

"You came here to gather together an expedition and return to Mu for the rescue of your comrades who are in deadly danger. Never could you carry such a gigantic project as this would require to its successful completion—and yet you have done it; for we of Nor have made a solemn vow to rescue the men of Atlan on Mu and to destroy the derodite who threaten to spread their evil even into dark space.

"However, because of your great desire, we have planned a place for you in this great mission. You shall have your part in it; and you shall have another duty which is worthy of your capacity for compassion. We, the Nortans, have seen in your mind a vision of the far future—of a time on Mu when men shall be slaves of the degenerate sun around which it circles; of a time when they will be but mentally deficient savages living out a life span compressed to an irreducible minimum by radioac-

tives. This may be a true vision, in part or in whole—for we may not succeed entirely in our mission. We may even fail!

"Therefore, we give to you the task of preparing a message, in great duplication, to these pitiful men of the future—so that there may be some hope that those among them who have the mental power to fight against their cruel environment may make their lives in some measure complete. This message will be left on Mu, and in it, in many places for future man to find."

The voice ceased. The conference was over.

CHAPTER VII

A Wedding on Nor

AS WE passed from the misty vastness of the council cavern Vanue turned to us of Atlan, trooping behind her, and said in a serious voice.

"It is law among Nortans that no service to the race goes unrewarded. Now there are certain things I plan for you which I cannot give you legally except you swear to serve me always as my loyal followers. Is there anything to keep you from that?" Her eyes searched us one by one.

The Mars maid answered, her eyes shining:

"There is only our oath to the state of Atlan, and the present evil conditions render that oath void."

Vanue went on: "I am only a young Elder; you might do better than to follow me—my fortune in the future is not wholly assured. You might do better!"

"You have honored us, Vanue," said the Mars maid. "You have let us see your mind at work; we know there is no evil in you. That your fortune should be our fortune is enough for me. You have said you will give the love of

our men back to us, and though I don't understand how you will or can, I know you will."

One by one we swore loyalty to Vanue before all other greater beings.

Then Vanue looked at ber Nor maids and said with a strange innuendo that made them laugh with delight and anticipation: "Now we must send them to school—in pairs!" The laughter of the gold-topped lily of Nor rang merrily.

What sort of a school was this, I wondered, to make them laugh so?

The tubes took Vanue's train to the doors of her own cavern palace. Huge air locks swung open to admit the whole procession into the under parts of the palace. When we stepped out into the special air of her home that tremendous acceleration of the life processes that I had noted in her chambers in the space liner again seized us—and life became a thing to really fear to lose.

But as yet I had no inkling of what lay before me in the mystery of the wisdom that had built that place to bouse their first borne, Elder princess Vanue, daughter of the Elder Gods of Nor.

Flinging off her wraps, which she had worn to the council chamber because of their significance, Vanue said: "We will put the children in school, and then to our own work. We have much to do to make ready and the time is short."

"School" turned out to be a vast laboratory—a replica on a much mightier scale of our own Titan technicon's laboratory school where Arl and I had learned to know each other and the possibilities of life. Instead of embryos, the nutrient tanks contained six foot ro and even much larger men and women.

TAKING Arl and I in her hands she placed us in one of the big tanks. The liquids were warm and comforting and we splashed about playfully while others of our Atlan group were also be-

ing placed in pairs in tanks like our own.

Then Vanue's maids swarmed about us, placing wires about our arms, our wrists, our hands and feet; fastening breathing cups over our mouths; thrusting needles into our veins and attaching them to the ends of thin tubes; placing caps of metal with many wires connected to generators and other machines on our heads; covering our eyes with strangely wired plates of crystal.

I heard the tank cover sealed and more fluid gushed in until we were completely submerged. We floated in suspension within the tanks.

Then began a strange thing; for our minds, Arl's and mine, were conscious of each other through the medium of the interrelated wiring and the plates over our eyes—an awareness that must have been augmented a thousand times. Her breath was my breath, ber thoughts took place in my head stronger than Vanue's ever had, and the woman-soul of ber was so augmented in my mind as to eclipse all other woman's appeal that my memory had ever recorded.

A strange little voice (it must have been Vanue's speaking over a tele-thought instrument) whispered beside me: "You will never escape Arl now. You are ber slave forever." And as I listened, I knew that Vanue spoke the truth.

Arl's face, laughing before me in the eye plates, became larger and larger, entered my brain, became the wellspring of my being. I heard Arl's thought, a vast river of force flowing in my mind, saying: "Where I go, there will you go also. The thing that is my desire is growing in you. My roots are your soul. You are my desire and the slave of my desire!"

And I heard my own thought make answer in Arl's mind: "So it shall be, always, oh maiden of the clicking

hooves and swift hands, of the beautiful tail, of the clean will and strong desire!" And I knew that what I said was true.

The fluids and forces that were pulsing through us made these things grow within our beings, so that centuries of loving contact were replaced by minutes of furious growth; and we fell asleep, strangely within each other our thoughts, growing and becoming an integral part of our being. Through every fibre of my body I could feel fecund growth swelling and expanding, patterned by thoughts which were mine and yet not mine. In my ears strange sounds beat mysterious meanings which were forces taking root within me. My memory was a vast garden of new thoughts growing as my mind grew, and remembering all the principles that came over the wires from the Elder Gods' own thought record.

ALWAYS overhead I could feel the Nor maids watching my mind pictures and correcting the growth memory so that everything took its rightful place. And within me I could hear Arl, sleeping and growing too, and she was very dear.

The thing that was me slept as a babe sleeps in the womb, and the seeds of the Gods' thoughts took root in Arl and I and grew. We were at once children asleep in the womb of the God mother, and man and wife wrapped in each other's adoring arms. Time flowed by like water; and we slept but were more awake and alive than ever before, and felt the pleasure of each the other's body and soul appeal, the very inner essence of man-life and woman-appeal to man. Life pulsed from each of us into the other constantly. We had more pleasure of each other in the growth school tank than ever I have known of in any pleasure.

Among the things that became a part of my knowledge was the promise of the future in such tanks as this: Sometime Arl and I were to build such a tank and apparatus and take a long sleep in it and awake as Gods, full of the strength and the beauty and the pleasure of life and life's fulfilment.

So it was that Arl and I were married by an actual mingling of the seeds of our being, and not by any foolish ceremony; blessed by the actual love of Vanue, now our Lady, and not by any meaningless words.

Though we were in the growth tank less than a week, we came out inches bigger in every way; but the real growth that had taken place was an inner growth—for I was vastly heavier and my strength was aware of new limits.

Mentally, too, I was vastly more able; for when I looked about at the apparatus I knew the inner construction and use of every bit of it, and I knew that from then on few things would mystify me other than the work of the very oldest Gods.

I found that I had not lost my love for Vanue, but that I loved her now as one loves and is grateful to a leader. My love for Arl was the strongest thing in me.²⁸

²⁸ The "school" of growth to which Mutan Mion and Arl and their companions went for their growth in both body and mind is the concrete manifestation in apparatus of the science of man-growth as conceived by the three ancient god-races. It was based on simple laws of the integration of matter. These simple laws are being set forth in a scientific monograph by Mr. Shaver and your editor, who firmly believe that its publication will throw a bombshell into all of present-day physics and chemistry. Naturally they cannot be dealt with in complete form here, but a slight explanation of what was done to Mutan Mion seems necessary. Part of this explanation is in the words of Mr. Shaver:

Growth is an inflow of exd. Life itself is a flame of integration, which like a fire must be fed, or it goes out. Exd is the fuel of that flame, and by

(Footnote concluded on next page)



... more fluid gushed in until we were completely submerged

All of us found out now that Vanue was not the most foolish of the Eklers of Nor, despite her comparative youth, but was looked up to everywhere as one whose star was in the ascendant. Her followers were more numerous than many much more prominent Elders.

Arl and I spent several days together in our love, and in seeing the wonders of Nor's civilization. Here was a vast series of underground cities, all heated and bathed in beneficial energies artificially created. No need for a sun's light to live. No danger of dis-integratives from a dangerous sun poisoning the soil and water of the planet, to cause slow death by age.

THEN one day Vanue called me to her.

"I speak now of the mission the Elders of the council granted to you in the conference chamber. As you re-

its condensation into matter, adds to the flame, causing growth. Naturally this growth is a material growth. What the Nortans did was to concentrate the flow of and so as to feed the flame of life at a greater rate, and thus cause greater growth. A technical simile might be drawn: a fire, when supplied with finely divided carbon and a larger supply of oxygen becomes a greater, fiercer thing. It is the same with life. When supplied with a greater quantity of end, it grows, becomes stronger, more active.

The mechanical means is very similar to the magnetic field lenses used in electron microscopes, which direct and focus a flow of particles called electrons into a beam more revealing than light because its particles are smaller. This same magnetic field principle can be used to focus end and thus hasten integration. A magnetic field, lens-shaped, could focus falling end by attunement just as a radio collects certain waves. This attunement can be determined by constructing a coil in the same shape as the coils of the electron microscope—but much larger. The focus can be determined by its light focus, which would be the same. A plant, placed beneath this point of focus perks up its leaves, reaches out, is invigorated, exudes a dew, in a short time is twice the size it would ordinarily have been.

Once there was a book called the 'T' book (T for integration, for growth force, energy, etc.) which was in rather widespread use up to the time of Christ. It contained the elemental frames of logic and simple what-to-dos like the age-poison

member, your part in the coming task is two-fold. In one phase of this you will accompany us to act with us in the great war that must be fought. We have developed a plan in which your help as an advance and secret agent is necessary. You will be told more about that later, when we have embarked.

"Now, however, your other mission begins, here on Nor. It is the mission of love for your fellow men. No matter how successful we are in rescuing the men of Atlan, it cannot be that we will rescue all of them. Many must not be rescued! There is nothing we could do for them, poisoned as they are to the point of death. Nor must we allow any of this poison to escape to the dark worlds where it can infect others. Too, the dero influence is dangerous, and madness must not spread over the universe.

elimination, beneficial generators, and so on. But some group feared its influence and it was destroyed, so completely that only the memory of that once infallible book remains, which memory was the father of the Bible and all its veneration, including the cross on its cover, the 'T' sign.

The direct need for a greater future for man is strengthening of the general mind by T forces, the growth of a better brain. No progress is truly progress unless man grows a better brain to grow a better brain. That is the pattern of progress—to grow a growth to grow a growth to grow, etc. What man needs is a conscious aim toward growth. To learn how to grow into a man better able to grow into a wiser man is a goal followed by but a few men out of all the number who could be striving in that direction. The great ones called such a goal 'TIC' and any energy not directed toward that goal was called 'ERR.' Alexis Carrel says much the same thing in 'Man, the Unknown.' He is one of the few men on earth whose efforts are not err to self interest. That is, he aims to understand his life process and make it last longer. True self interest is seen in his efforts, as in few others. These others think of self interest as an oppositional of other self interests—which is a de illusion (Atlan for disillusion), for oppositionals neutralize. True self interest would therefore always be a coincident, not an oppositional.

Our most basic concepts have become err from disintegrant force distortion of thought flows over the long period of time since we were children of the Gods of the past.—Ed.

"Thus it has been given to you to inscribe on imperishable plates of telonion, our eternal metal, a message to future man which will be placed on and in Mu so that those who have the intelligence to find and read it may benefit by the truths of growth and defense against a too-soon death by age.

"After the passing of Atlan science from Mu, men will begin to die at the same age, and their sons will all be the same size at the same age. This will be caused by accumulations of sun-poison in the water of Mu, which will stop all growth in mankind at almost the very beginning of their development. They will scarcely get beyond childhood before they will begin to die.

"These plates you will inscribe will contain a message that is a key and a path to the door that will open life value to these future men, whose fate we know and pity, but cannot prevent. We can only teach them what we know that will enable them to get the most of their life out of Mu. The dero will not be able to read, and thus will die as they should. Those whose minds are powerful enough to escape complete dero-robotism will read and profit.

"You can tell them how to attain this life growth by freeing their food and water intake of all the poisons that will be found in it in the natural state. The age poisons can be removed by centrifuge and by still; their air can be made a nutrient by proper treatment and freed of all its detrimental ions by field sweeps of electric. The exd on which the basic integration of life feeds can be concentrated (just as it was in your body in the growth school tank) in energy flows which greatly increase the rate of growth and the solidity and weight of the flesh.

"Tell future man to do these things, Mutan Mion, and their reward will be great. You have seen what the reward

of such effort can be—in thousands of years of life's fullness—even on a planet under a detrimental sun. We cannot save those men yet unborn. We can only leave for them the heritage that is rightfully theirs, the heritage of our sciencon knowledge. And you, Mutan, in your infinite love and pity for your fellow men, shall perform this task with all the energy that your love makes possible!"

I LEFT the presence of mighty, Vanue, marveling at the understanding of the Elders and Gods of Nor. No wonder that their race is so great. To me, the humble artist of Sub Atlan, had been given a great mission; one that thrilled me to my depths. I hurried to Arl to tell her all about it.

"The wonder of it!" I exclaimed, having repeated what Vanue had told me, "In my hands—the simple, awkward, unskilled artist's hands of Mutan Mion, culture man of Mu—has been placed the hope of future man! To me is given the honor to preserve for men yet unborn the knowledge of their heritage of life!

Arl held me to her, and her eyes were shining.

"Yes, I understand," she said.

"There is more!" I went on. "The Nortans set out soon to rescue many thousands of Atlans and Titans and their variform offspring from the threat of death by a dying sun's radioactives, and from the black death of the dero-dite; but I, Mutan Mion, am to be the rescuer of untold numbers of future men down through the history of Mu, until the very planet is dead! Think of it . . ."

Arl kissed me tenderly. "Go, Mutan, and busy yourself with the beginning of the message. You have but little time, and I think you should begin by putting down the story of Mu—our

story!—and thus give body to the message to future man. Perhaps he will not even remember Atlantis! Nor Tean City, nor all the other vast cities of center Mu. Perhaps he will not even remember that there ever was such a being as an Atlan or a Titan or a Nortan. It will be your duty to tell him that, too, my loved one. For how can he believe and hope if he has no knowledge of the truth of life?"

"Most certainly must I tell them of you!" I exclaimed. "Never in all Time was there such a woman!"

And kissing her again, I hurried off to the sciencon laboratories to gather the materials necessary to begin scribing my imperishable plates of telonium with the message of hope to Lemurians unborn.

For many days I worked, putting down the truths and the knowledge to overcome the poison of age to the fullest possible extent, as it is now done in Tean City and all Mu; and the means to full life growth. I told the story of our flight from Mu, and much of the history of Mu. I told of the Titans and the Atlans who live throughout all dark space; who are searching ever for new suns. I told of the Nortans; who do not believe in living near any sun, old or new.

I brought my message up to date—and barely in time. For when I had finished Arl came to me.

"Vanue's ship leaves for Mu in a few hours," she said. "You must be ready."

At that moment it hit me—these were my last hours with my loved Arl until I returned from the war in Mu; if ever I returned; Now, for the first time since reaching Nor I knew sorrow. But Arl saw what was in my mind, and her words brought joy back to me.

"I am to go along, as operator of one of the telescreens on our own ship," she announced happily.

I should have known that my loyal Arl would never consent to remaining behind while I went into danger!

"Your life is my life," she was whispering as she snuggled in my arms. "Where you go, there also will I go. Your soul's nearness is my desire."

CHAPTER VIII

Return to Mu

IT HAD been but a short month since our arrival on Nor. Many had been the preparations, most of them unknown to me. Only now as I went to the launching cradles did I see the full extent of those preparations. I found a fleet of mighty space vessels lifting from the frozen face of Nor, leaving to gather at a rendezvous in space.

Vanue's own vast vessel was not the least among the fleet, nor I and Arl the last aboard. On her viewscreens we watched countless other ships lifting on reverse gravity beams with what seemed to be almost utter ponderance until they reached a point in space where they could take up normal flight. New-built ships these were, wonderful in their engineering and armament.

We watched, also, many Nortans, mostly Nor war-maidens and Nor warro, embark on our own ship. Vanue herself was already aboard, together with several other Elders of minor stature. They brought with them vast quantities of material of unguessable use. Observing it I understood that their purpose was not wholly to save the people of my race from their sad plight, but to nip in the bud the growing power of Evil forces so near their own stand in space. That they were wholly confident of their ability to do this, I knew, but I knew also of the mighty armaments and endless warrens of the Atlan armies. I had seen their

tremendous vessels maneuvering around Mu on the viewscreens and the news teles. I hoped the Nortans were not overconfident.

But as we proceeded into space toward Mu at greater speed, I found that I did not really know the Nortans. I had underestimated them. They understood concept, and I came to realize that concept had become a frozen thing on Mu by comparison. The Nortans used the truth, for it was the right conceptual attack. Evil has no concept; it is a mad robot to detrimental force. When Evil has power and men must obey or die, then only is it to be feared. But sometimes men fight for Evil unknowingly.

As we passed an Atlan space station a Nortan ship would land and presently take off again, followed by all the ships of the station. They had just told them the truth. The Nortans had an ancient reputation that forbade any doubt of their words. It was as simple, and as powerful, as that.

This went on so often, that as we neared Mu the Atlan fleet with us was nearly as large as our own. The truth can be a mighty friend and these space warriors knew the Nor-men and trusted them.

So impressed was I by the ships of this vast battle fleet that I was tempted to go to my quarters and describe them as part of my message to future man; but I abandoned the idea. I reasoned that if my message was a needful one when it was found, its finders would have little use for, or need of, such technical information as the construction of space weapons.

Perhaps when they learned again to fight the aging power of the sun and the evil her disintegrant force can bring to life, they could again learn such other things as they would need by searching space for friendly peoples.

There was an idea—I would put down the information necessary to direct such a search. It would be a simple thing—for the great ones would never be found near or under the rays of a sun as old as this one will be by then. Aging suns would always be a space horror to be shunned by all men. Only the action of the derodite on Mu had kept our own Atlans so long under its rays. Only on or near dark worlds and new suns would the great ones be found.

IT WAS while I stood at Arl's side watching still more Atlan ships join us that a thought came to me.

"How can the Nortans so quickly trust the ships of the Atlans as to allow a number of them near their own fleet?"

"Silly," chided Arl, flitting her tail at my question, "they don't trust them. It is not a question of trust. They just place a very large female Elder aboard each ship as it joins our fleet and there is no further question of trust or obedience. Supposedly she goes aboard 'to advise the commander as to our plans and to interpret our ways to him,' but you know the real reason—"

"Of course!" I interrupted her with a rueful grin. "I should certainly understand from my own recent experience with Vanue!"

Atlan warriors are all male. Those commanders and their men would be unable to do anything else but obey, with complete loyalty. They could not do otherwise, for they could not find the will or wish to do it. Not even the commanders of space ships are Elders by any means. Under the spell of that vast woman-life, they would be helpless to her will in their ecstatic love for her.

There were maneuvers as we neared Mu, but I saw little of them. Most of the time I was busy with my telonion plates, inscribing further knowledge or

duplicating them so that they might be deposited in Mu in many places.

Another job I had which took up much of my attention was the task of making thought-record from the heads of men in Atlan vessels nearby, in an attempt to learn what had happened in Mu since our flight. They knew little, for the telenews had evidently been as uncommunicative of Atlans' true troubles as before. Some whispers they had picked up, but nothing of great value.

I kept on, but it was of little use. They knew just enough to make them ready to join us, but no more. There was nothing that would help us in the coming battle. All we knew was that we were enroute to war upon an enemy who was undeniably powerful, but whose identity we would have no way of knowing—until he struck first! And that first blow might be a terrible one . . .

Noting some agitation in the ship I was watching, I focused on the commander's quarters just in time to hear the last of a general message from surface Atlan:

"—and since we hold the population under our war rays; and since the safety of that very population we know to be your objective; let me warn you that the very first sign of an attack on your part will be the signal for a general slaughter of the people on our part. They are only in our way anyway. You may kill us in time, but you will never attain your objective!"

The horrible import of the message stung me into inactivity for a moment, then I recovered and with haste swung my ray to hear Vanue's reaction to this problem-posing message. What would she reply? Or had she a reply to this development? Death for the very people we had come to save rested in her hands . . .

Then came Vanue's voice; and it held

a world of bafflement in it, a note of defeat that opened my eyes wide in disbelief.

"Return to Nor," was what she said!

RETURN to Nor! Abandon our mission? No! It could not be. There must be a ruse in Vanue's mind. Vanue was not the kind to give up, even though the odds seemed great. Then what—

Vanue's voice in my mind said a single word: "Come."

I switched off my thought recorder ray and bounded down the corridor toward the great doors of hammered metal, a wild joy in my heart that at last she had need of me, and that certainly this was a ruse.

Even before I reached the great doors I knew one thing: Vanue's ship was not retreating toward Nor as the others seemed to be. Under cover of the swarm of retreating ships, our own vessel had slipped into the moon's shadow as we passed her and had come to a halt hanging there invisibly in the moon's earth lee.

Once I arrived before that vast flame of beauty I sank to my knees, but she reached out a great hand and raised me to my feet. From her desk she took a tiny box and showed me its one projection—a tiny stud; a switch.

"Take this and put it in your clothes. It looks like a pocket reading machine, and it will not be noticed with suspicion. In the locks an Atlan ship and pilot is waiting for you. He has been directed to take you to surface Atlan.

"Once there you will mask your thoughts in any way you please, for I know your ability in that respect. Then go to your old home in Sub Atlan. There turn on your telenews and wait beside it until you hear three clicks from it, repeated at uneven intervals. Then take out this box and press the metal stud

full in. It will tell you what to do next. That is all."

I bowed low, kissed her foot's radiant flesh, and ran from her quarters.

The Atlan ship was waiting for me, the pilot ready and silent. He pointed out my old Atlan student's outfit, which was already aboard, and indicated that I was to wear it. I jettisoned my Norton uniform and in a moment was once more Mutan Mion, life-culture student of center Mu.

When I had completed my transformation I found that the ship was already rocketing down the regular passenger lane from moon to Mu. The pilot, an Atlan, spoke a few words of explanation and lapsed into silence.

"I am a taxi driver and you're a passenger. Mind that—and luck!"

It was all so simple. I could hardly believe it would work. But it did. The ship settled on the public field, I jostled my way into the tubes, and soon was roaring along toward my home—a student returning from an outing.

I SWITCHED on the seat telenews but apparently nothing was happening.

It recited the most inane occurrences: a taxi motor failure had plunged two fares and the driver into the sea, and they had escaped with a ducking; a snakeman had caught his tail in a subway door, but would live; our adored chief Elder was having a birthday, may he have many more . . . I switched the telenews off. Anything could happen—and to Atlans nothing out of the way would even be whispered. Of the vast Nor fleet that had been so lately above, not the slightest hint. Great was the control of the derodite in Mu!

Not easy would be the task of the Norton invaders!

Reaching Sub Atlan, I made my way to my own home, threw my hat at the

old place on the hat rack, embraced my mother and kissed the tears from her dear face, slapped Dad on the back and answered his grunted "Where in the whirling world of woolheads have you been wandering?" with "Just sewing a wild oat. I'll tell you about it at dinner," and bounded up the stairs to my old room where I switched on the telenews and lay upon my bed, carefully masking my thoughts by thinking what tale I would make up to explain my outing to Dad.

Three sharp clicks from the telenews startled me. I had not expected the signal so soon. Vanue must have been watching. I leaped erect, drew the box from my pocket and pressed the switch. A voice came from the box.

"Put this box on your head and put your hat on tightly to keep the box in place. Do not take your hat off for any reason from then on. Go outside and walk around the block. Soon you will notice a strange thing; after which you will get more directions."

I did as directed, promising to return soon when I dashed past my astonished mother and father. I stopped only long enough to retrieve my hat.

Outside a strange drowsiness came over me. It was hard to move. The lights of Sub Atlan flooded the ways, but I ignored them and walked slowly around the block. I noticed the girl at the food tablet stand lolling fast asleep over her open cash drawer. How very careless of her, to sleep so. But then I found the service ro at the rollat stand also deep in slumber; and several of his customers sprawled in slumber on the seats with the doors open, the hood up.

The voice in my hat explained the mystery.

"By now everyone in Sub Atlan but yourself and certain others is asleep. So will you be if you remove your hat and the box, which gives off stimulat-

ing vibrants.

"Go at once to the administration center and switch off the auto watch and general attack alarms. Bind the chief Elder and anyone else who seems able to frustrate a landing. Then, when everything seems safe, put a communication beam on our position and guide us in."

THE Administration building in Sub Atlan is a great tower which reaches not only to the roof of the cavern that houses Sub Atlan but through that roof and on up to surface Atlan, where it looms as the tallest building on the surface also. Great rollat ways connected the surface building with the sub building.

I activated a rollat at the curb stand, dialed the administration center's number, and drove the rollat by hand directly into the great hall and up to the doors of the council chamber. As I arrived I was surprised to see four of my comrades. Atlans from Vanue's ship, racing into the hall behind me from rollats at the curb.

I nudged the great doors with the rollat bumper. They held. Turning the thing I drove across the hall and came back at full speed, crashing into the great valves and at last they gave. I plunged into the hall, brakes squealing.

CHAPTER IX

The Abandondero

INSTEAD of finding the old chief Elder and his aides about the room, there was nothing. We raced through the place toward the telemechro center where the rodite mechs of the whole city were supervised by a concentration of screens which controlled them all when necessary. Upon these screens

the whole city was watched, and could at any time be wholly robotized in an emergency from this point.²⁹ And here we found them, the controllers of the city; but they were *not* the giant elders I had expected to find. I broke into laughter at the sight of them.

Clothed in rags and dirt, hung all over with hand weapons, their hair long and matted, were the strangest, most disgusting creatures I had ever seen in my life. They were dwarfs, some of them white-haired, from the Gods know what hidden hole in Mu's endless warren of caverns.

"What in the name of mother Mu are these things?" I asked Halftan, who had been one of the Atlans arriving immediately behind me, and who now helped me in the task of binding the hideous dwarfs in turn after turn of the heavy drapes from the walls.

"You already know of them," he said. "They come from the abandoned caves and cities of Mu. When the machinery became defective from age, many centuries ago, a vast number of caverns were sealed up. Fugitives hid in them used the defective pleasure stimulators,³⁰ and as a result, their children were these things.

²⁹ The telemechro center was in itself under outside control, the communications mechanics being so to the central control which was so to the master control in its turn. Thus, all the rodite supervising the city could be placed under one master control through the screens in the telemechro center. By this means, the whole city's inhabitants could be placed under hypnotic condition, even including the rodite themselves. From this it can be seen the telemechro center is a vital spot in the dero control which has been thrown over all Mu.—Ed.

³⁰ Entirely aside from our questioning of Mr. Shaver, we received a letter from him in which he describes the pleasure stimulator mentioned here. Or rather, he describes the sensations concurrent with its use in a very peculiar manner—since his words seem to indicate that he himself went through the experience. Whether or not the following words are those of Mr. Shaver, or of (Footnote concluded on next page)

"They die of age, are stupid, cannot even read or write, but they must have a vicious, cunning leader who has learned to use them. They are called 'abandonero' by the techs, who have captured some of them for study.

"If you had been in Tean City years ago, you would have heard them talked about on the telenews. The ones shown then were so stupid no one paid any attention. There is nothing so careless as a swelled head, I guess. Those supremely intelligent Elders of ours who should be tending this center will probably be found in ashes in the incinerator!"

His words wiped the laughter from my lips. No laughing matter now,

Mutan Mion, your editors have as yet been unable to determine. Certainly some of them are Mr. Shaver's (which only makes them more startling in their implications) and certainly some of them are not. In either case, they give us something to ponder upon.

"They played stim on me, a powerful augmentation of woman-love; to a hundred powers of natural love. There are no words to describe what this apparatus did for life. There were hundreds of rays about, always pleasant, their messages like conversation as though a thousand Scheherazades were telling tales at once. It augmented every cell impulse to a power untold. It seemed that every tree carried a beautiful face; every breeze was like a hush in elvish; every sensation having the value of a thousand nights of love. Little bells and visions of indescribable beauty mantled my closed lids to wait me into a sleep of dreams beyond anything mortal mind could devise." (*Note the difference between the foregoing paragraph and the following—Ed.*)

"These mechs—rays—stim—have been used always as the forbidden fruit of life, the last treasure in the temple of secrecy which has consumed the ancient science. The orgies which the uses of such stimulants inspire have been going on secretly since the earliest times—beneath the temples and in the secret pleasure palaces of the world. (*Shaver here seems to be talking of our modern world, not of ancient Mu—Ed.*) These orgies still go on, and are more deadly than before—more filled with accumulated in the apparatus, the stim itself concealing the deadly rays whose effect is explained as the sad results of overindulgence; which is untrue—the stim is a beneficial of great virtue and leaves one stronger and wiser after use.

"The legend of the sirens is an example of ancient mechs which no one could resist—in the

these ugly dwarfs! They were dero, children of dero, enslaved in some manner by the derodite master who sought the death of all Mu! And the very fact of it brought home to me the greatness of the menace we were beginning to fight. For the first time I felt some misgiving as to the outcome.

WE FINISHED tying the filthy brutes and then turned our attention to the immense central synchronizing screen where a multiplex view of every station in the city could be seen. At each screen slumped the particular wizened dwarf who had been operating it, and who was now fast

hands of evil degenerates it became a deadly attraction—drawing shiploads of men to death and the ships to looting.

"The course of history, the battles, the decisions of tyrants and kings—was almost invariably decided by interfering control from the caverns and their hidden apparatus. This interference, this use of the apparatus in a prankish, evil, destructive way, is the source of god worship, the thrill of divinity, the sensing of the invisible, the prostration of the will before the stronger will of the ray gen (hidden and unknown as it was).

"The remarkable part of it all is that it still goes on today. Emotional and mental stim—unsuspected by such as you and the average citizen—used in mad prankishness, all come from the ancient apparatus. If you will remember your stage fright in the school play, the many other times when your emotions seem to have gone awry without sufficient reason—were these natural?

"The dero of the caves are the greatest menace to our happiness and progress; the cause of many mad things that happen to us, even so far as murder. Many people know something of it, but they say they do not. They are lying. They fear to be called mad, or to be held up to ridicule. Examine your own memory carefully. You will find many evidences of outside stim, some good, some evil—but mostly evil."

What Mr. Shaver hints here is the subject of another story on our desk. He gives this information in all seriousness. In the deserted (and not so completely sealed?) caverns of Mu, the dero descendants of the abandonero still exist, idiotically tampering with our lives by senseless use of the ancient stim mechanisms which actually were created to enhance man's life and not to plague it, but now are detrimental through an accumulation of radioactives which impair their action.—Ed.

asleep and secured by our makeshift bonds on his limbs.

We activated the big space communicator, swung the beam toward the approximate position of Vanue's ship, sounded the 'ware' signal.

Instantly Vanue's face appeared on our screens—and we flashed the view beam on each of the bound dwarfs and on the big multiplex screen, showing the sleeping dwarfs who had replaced the original Atlan Elder's rodite. She nodded comprehension, not speaking. Then she switched off her communicator. We waited; it was up to her from now on. Meanwhile it was up to us to hold the fort here in the telemachro center.

"Thank Venus," said Halftan, his eyes aglitter with excitement, "these creatures are stupid, or we would not have overcome them so easily, nor would our job holding out here be as easy. Smarter operators would have managed to flash some signal when they sensed they were going to sleep."

I was inclined to agree that his analysis was correct. But I also added mentally that when no checking signals went out in the next few minutes, an investigation might be made from Tean City, or wherever the central control was located.

"Do you suppose our enemies never heard of a sleeper ray?" I asked Halftan.

"Did you, before you met Vanue and the Nortans?" countered Halftan. "Besides, these dwarfs are sub-dero, not thinkers! I remember from the old tech report on them in the news. I wondered then why no one made a move to clean them out, but concluded that it was because they could not think coherently enough to be a menace. I realize now, however, that our corrupt big-heads were using them even then by some means that they had discov-

ered."

"I was not talking of these dwarfs," I said. "I am wondering about the rodite and the big-heads themselves."

Halftan's face grew thoughtful, and he began a watchful survey of the multiplex screens with a new tenseness evident in his body.

BOTH of us saw it coming at the same instant, and a shock of real surprise swept through us. The dark bulk of Vanue's great Nor ship showed on the screens shadowed over the great surface tower of the administration center. The lightless ship had drifted down the communicator beam! What power Vanue must have, not to need the lifter ray for landing! What unknown science to use a communicator beam as a pilot beam!

It hovered for a brief time, then the roar of its great jets became a maddening thing; and the ship lifted again into the night sky. Why had it come, and what had it done? Had it done anything?

Our wonder lasted only a brief time, for soon we saw Vanue coming into the center, dwarfing it, stooping low to clear the ceiling fittings. Swiftly after her came her Nor maids, a hundred or more of them; and a dizzying activity sprang into life about us.

A tender from the Nor ship was lying before the doors of the hall, and in and out we Atlans and Nor maids sped, trundling trucks of apparatus. Once emptied the tender returned to the surface. Under Vanue's eye the dwarfs were unbound and placed in their former positions, while a rodite beam was set up behind each screen. Now they were held in a ro beam from a Nor maid's mind, the slaves of her augmented will.

The hangings were replaced; the space communicator switched off; even

the marks of binding were chafed from the dirt-encrusted wrists of the abandonero. Then we hid. To the view screens all was as before our entrance.

Vanue gave a signal, and somewhere in space the sleep ray switched off. The city came to life. That sleep had not lasted more than thirty minutes. Would the freaks from the lost cavern realize what had happened? On that question depended the lives of millions of people, all over Mu. Vanue had no doubt but that the derodite would carry out their murderous threat to kill the people if we attacked. Well, we had attacked, but in a way Vanue hoped would not be realized.

The telescreen from Tean City began sounding a constant call. The nearest dwarf, a hideous old woman, reached over and threw the circuit open. On the screen was the furious face of a fat Atlan. He was one whom I knew well from his appearance on telenews screens as a high official in Construction.

"Where have you been?" he screamed at her. "Don't you know how tough a spot we're in? Your orders are to stay on duty until relieved."

The hag's hoarse voice answered, a groveling fear on her dirty old face.

"We had a li'l trouble. One stray Elder came in with a private key, nearly bumped us all before we did away with him. Everything is all right, else. Nothing to worry about. He didn't know what was doing—been away for a year. He's dead meat man now."

"Might have upset everything," the fat Atlan growled. But he seemed appeased by the news. "The overgrown fools. There aren't many of them left alive in Mu. Let me know at once if anything else turns up."

BEHIND him, on the rodite screen, before he turned off the beam, we could see a scene of mad revelry. In

the background were the tremendous figures of some of the great ones of Atlan writhing in horrible torment while about their bodies crackled the blue flames of some pain-giving electric. Drunken renegades from Atlan's army reeled across the screen, dragging protesting girls after them. It was evident that they were celebrating the frustration of the Nor fleet in a manner deemed to be appropriate!

Then the Tean City screen went blank as the beam was switched off, and the old hag, her face a toothless grin at what she also had seen, reached out and broke the contact on the screen.

On the various units of the multiplex screen from the sub-rodite stations of surface Atlan and sub-Atlan cities much the same conversation took place. Each abandonero explained apologetically that he had fallen asleep and begged not to be reported. Each was reproved by the ro at the "plex" control.

We knew that they would never realize that all had fallen asleep. Many even denied their sleep, claiming they had had no signals. All reported everything all right.

"All right indeed!" I could hear mighty Vanue's thought in her furious mind. She waved her hand—and from somewhere in space that big sleep beam went on again.

On the multiplex screen at the center we could see Nor-men entering everywhere, setting up control apparatus without awakening the dwarfs. All over the sleeping city Nor-men were active, setting up hidden controls, ships landing and taking off—the armies of Nor gathering and entering the caverns. . .

Could they do it? Could they take the planet without setting off the alarm which would bring death down on the helpless people? As I looked at the sleeping, hideous things whose forebears had once been men, I felt they

could. And when they did, I would not have wanted to be in the shoes of the Atlan or Titan who had trained and turned these things loose on the people of a whole planet! There would be a grim reckoning when the Nortans caught him.

"VANUE—Vanne!" called a Nor maid to her mistress. "I have it! I have been reading the mind of this thing in its sleep. The center of this whole mess is not in Tean City nor any city, but in the abandoned caverns. Some ancient Elder, exiled long ago, returned secretly to Mu and entered those sealed cities. He has been chief of the abandondero for all their life. All their orders come from him. They do everything he says—nothing without his word. If we took the whole planet, we would still have his high and mighty madness to reckon with, together with a horde of these creatures who do his bidding—with Venus herself knows what kind of antique junk to do it. Some of those old war mech builders were not fools, and their methods were lost in wars when they were killed. You know, like the one time we ran into antique war mech on Helbal, when the dero of those old burrows used that stuff on us. No one knew what it was. We had to blow it all to Hades to get them."

Vanne picked her up with delight and kissed her. "It was becoming increasingly plain to me that this was not the first time these warrior maids had seen action. They worked too smoothly. With the hand weapons and war weapon harness they wore, they were formidable looking Amazons. Their strength was unbelievable, and I knew it came from the inner growth of the incubator which increased the solidity of the flesh. My own period in the incubator had demonstrated that on my own body.

With the new knowledge the Nor maid had picked up, a new plan of action came into being. Vanue relinquished her authority in the telemachro center to one of the many space officers who had been going in and out on errands mysterious to me. Then the hundred Nor maids and ourselves accompanied Vanue to the tender and we were soon flashing skyward up the rollat tunnel and out into space.

CHAPTER X

Into the Tunnels of the Dero

FAR out in Mu's nightshadow lay the silent fleet, dark and still as any lone-some rock drifting through space. We reached it and boarded Vanue's ship. Once aboard Vanue called a conference of fleet commanders, but we were excluded from it. Very obviously something very special was being planned that demanded no loopholes for a leak be left open. Not that we would consciously allow such a thing to escape our minds—but after all, we were only ro and far below the mental caliber of the Elders.

When Vanue came from the conference, her cheeks were flushed, she was beaming triumphantly, and her aura was pulsing madly. She went immediately into the tech laboratory of the ship and ordered two of the hideous abandondero brought in for examination.

They were placed in a telaug²¹ and examined exhaustively for details of the lost caverns' entrances and exits and the location of the renegade Elder's power plants. Also we got a more or less clear history of what had been happening on Mu for many years; although the pic-

²¹ Telaug—a machine which augmented and strengthened telepathic signals so that even the most secret thoughts could be read—Ed.

ture was about as clear as mud to the abandondero themselves. They had minds like rabbits—like mean rabbits now suddenly discouraged in their meanness.

For many years, most of their short lives, they had been stealing youths and maidens for torture and tormenting thousands of the Atlans with rays right in the streets. When any Atlan had tried to do anything about it, it had only resulted in his death by one means or another.

How this idiotic dominance of theirs had been kept a secret for so long a time, while it grew stronger and stronger was comprehensible only when we understood that the centralizing of all power by the rodite method of government had allowed complete control once the central rodite synchronizer was taken over. It had meant the sudden and complete end of Atlan government without even a suspicion that such a turnover had taken place.

When the center had gone bad no one had known. Even the abandondero couldn't tell us, except that they knew it had been long ago. Little by little, after the important coup, normal Atlans in charge of minor branches of the rodite government had been replaced by abandondero. The secret police had been killed off! By their strangle hold on the telenews centers all knowledge of such deaths and disappearances were kept from the Atlans. By continually checking over people's minds for any who were becoming suspicious, any breeding trouble could be checked before it started.

For Venus knows how long they had been picking off the best brains of Atlan, the very flower of our race; doing them to death day by day, and no one was ever the wiser.

Much of all this we had to guess, for the abandondero actually knew lit-

tle of the master organization beyond their own vicious experiences; but they knew their ancient warrens well and we could deduce approximately, from the ugly, half-formed images in their minds, where our objectives lay.

WITH this information in our possession, we went into action. In a very short time a host of tiny winged planes were dropping silently toward the vast culture forests, where the hidden degenerates had made tunnels to the surface to gather fruit.

These planes were sealed-cabin bell-copters, equipped for short flights in space by auxiliary gas jets, silent and flareless.

Our primary objectives were certain tunnels which held cables running to Tean City as well as other tunnels which held cables connecting the depths with the surface.

I kissed Arl lingeringly before I stepped into one of the planes and took off for Mu's forest-covered surface and became just one of many dropping motes that looked harmless enough but which carried more might than had ever before been gathered into such compactness.

We landed and made our way into the tunnel nearby. It led down steeply, and was a very ancient thing once we had gotten beyond the area constructed by the dero. It led soon into vast caverns housing long-abandoned cities.

These ancient ruins in the lost caverns were impressively eerie things. They had been built, I knew, in the early days of Mu, when under the new sun all growth had been furious and undying, with a fecundity scarcely to be imagined in present-day Mu. Most of the people who had once lived here had long ago become too big to stay in Mu; had gone to larger planets under other suns, or to huge, cold, planet-cities that

drift in dark space. From what they had left behind I became more and more convinced that Mu's youth was too much of the past to have any more future. The planet should have been abandoned long ago. Just the contemplation of these mighty, long-gone glories in comparison with the lesser marvels of the best of modern Tean City was enough to tell the story to even the most thoughtless of Atlans.

Our lights played over the deserted, awful, death-like glory of the ancient mansions and even the hue of them gave off melancholy. However, to the warro and war maids accompanying me, such thoughts as those were not in order. Instead they kept sharp eyes and minds open for danger. What weapons lay unused in these tremendous fortresses from Mu's wild youth only the oldest of Elders could guess. And which of them might suddenly prove to be manned by warriors of the renegade Elder was something we could not know. But from the portent of their presence we realized that our enemy might be a tougher nut to crack than we dreamed.

As we marched down the silent, dust-laden ways, sleep rays and augmentative detectors of several kinds played miles ahead of us. Now and then we came upon a modern rollat, wrecked against the wall of a building, a dero asleep in its seat. They had crashed because the auto drive would not work here—check rays at corners and building entrances not being activated.

IT WAS not many hours before our communications beams told us that the enemy cables had been cut; and so far as could be determined all dero communication beams had been tapped with false answer equipment and so placed in attendance. So far our march into the depths had been accompanied by

signal success. Next would come the actual locating of and the attempt to reduce the cavern stronghold of the renegade dero Elder. Rolling behind us as we advanced came an endless line of burden rollats, bearing war rays whose potency was incomprehensible to me. But I could guess from their complex construction that here were things that could loose terror itself. Before many hours I expected to see them go into action, loosing that terror upon the author of the fear that had ridden hag-like upon the back of Tean City and all Mu's Atlans for many years.

It was then that I got a shock—for a big carry-all came riding by and in it, among the warrior maids bearing the crest of Vanue, was Arl . . . lovely, smiling, brave Arl of the cloven hoofs and defiantly flirting tail!

She flashed her teeth at me gaily as though she were on a picnic!

What is there about danger that accentuates the man-life in a man? As that smile played on me, the whole cosmos whirled in my head. I felt even more powerfully than I had in the duo-incubator the sensations of one-ness that existed between us. Comets buzzed in my head and I felt the urge for battle surge up in me; battle to preserve for myself and all others happiness such as was Arl's and mine.

Then, as we skirted a vast city bowl lit vaguely by a kind of marsh light that glimmers in these old warrens, action came! A dis ray raved out at us suddenly from a dark pile in the bowl several miles away. It cut great gashes in our columns before the swift, silent answer from the ray rollats had reduced the whole pile to silence.

Gray dust rose in a cloud over the bowl city as we swarmed into that huge old city-center building; and the horror that we found inside cured me forever of all sun lit planets. These

devilish abandondero had a meat market in the lower floors, filled with human flesh; and a pile of choice cuts I saw was composed mainly of Atlan girl breasts! These dero things were cannibals and lived off immortal Atlan flesh!

So much for our illusion of benevolent government! How long had it been composed of hidden, grinning cannibals, the whole of our race unaware of its ultimate fate? I realized now that it takes more than patriotism and fine words over a telescreen from a ro face to make a state a safe place in which to live.

Because of a degenerating sun, all our apparent tremendous scientific advance had been set at naught by a few madmen . . . with these dero creatures eager to do anything the madmen said in return for a little fresh human meat. I saw now the fatal weakness in centralized government. One silent grab at that neck of power lines had resulted in death for the whole cream of the race. The awful power in telaug rodite methods of rule had only served to place the total wealth of the planet in mad criminal hands.

Yes, Halfan is right! There is "no thing so careless as a swelled head." To see sweet Atlan girl breasts displayed as a butcher's merchandise set a fury to raging within me that will not cease so long as de makes dero!

THOUSANDS of the ragged, filthy abandondero lay about the huge building, unconscious from our rays, and we put them rapidly under telaugs to get a complete picture of their strength and the location of their other forces. Once we had gained our information they did not live long! We could not think of them as human things, these slaves to the disintegrant impulse to destroy that courses through

all matter under an aging sun; and perhaps we, too, in this moment of horror, felt within us the effects of the sun poisons.

The children of the abandondero lay about naked or with a few rags draped on them, usually with a human bone they had gnawing upon or playing with clutched in their hands. Vanue had all of the children gathered up and sent back to the ship "to treat them and use them to people a small planet as an experiment."

"Let that planet be far away!" was my thought.

We had learned from our searching of the minds of the abandondero that the old Exile's stronghold lay far in, nearly at center Mu. Yes, the rot had progressed far in Mother Mu. Always in my mind the most amazing fact of this rot will be the extent of its influence in the energy pattern of Mu's life-supporting energy flows. This dictating pattern had been so effective that their plight was not known nor hardly whispered of by any of the Atlans. Yet they were slaughtered indiscriminately, sold as meat to the abandondero, and the gods know what else they had put up with for how many years with the sickening realization that to appeal to higher-ups for help would spell death. All these years . . . without managing to make their plight public knowledge!

The telaug records told us that many of the dero had been torturing and tormenting Atlans all their life, and eating them too. Yet the news systems had managed to ignore all such tales, partly from individual fear of consequences, and partly from a dread of being considered mad for harboring such suspicions. There is no cloak for corruption like the average citizen's supreme faith that all is well as long as the paper is delivered, the telenev functions without saying anything alarming, and

the dignitaries strut their pompous fronts regularly as upholders of righteousness.

I could see what had made them so supremely blind now. It was the effects from which the migration had been intended to save them. Yes, that migration had been delayed too long by a few centuries, it appeared.

IT WAS another thing for me to stress in my message to future man; to inscribe on my timeless plates of telonion. Those who will people this planet again with children from the seed of the few we will not be able to find and rescue must be warned that there can be no peace nor beauty in life under this sun, except that they build special chambers which exclude detrimental forces as well as the radioactives that cause age.

Just so long as Mother Mu spins under this sun, just so long will her energy fields induct disintegrant charges from her destructive force, and these charges will work out into neutralization of man-matter growth through destructive will in the units of the life pattern. Without extraordinary precautions these detrimental forces will result in continual war and complete stalling of all real racial, social and individual growth.

If one of future man's really healthy men creates a machine of value to his people, one of the destructive men will take the same machine and destroy that same gain with it. Disintegrant energy must be neutralized by an equal amount of healthy integrant energy. If it is not, this disintegrant energy will work out in continual social troubles, famines, diseases and death—if it does not actually take the form of a war.

This need not be the fate of future man! The life which grows in integrative source material concentrating chambers can be safe, immortal life—

but all life outside such chambers will be destructive, if not by actual fierce blows, then by stupid interference and destructive disapproval.

These are the truths I, Mutan Mion, culture-man of Mu, realized even more forcibly now, must pass on to future man, written on tablets that will be deposited in likely places so that they may be found in some future time. These truths—in addition to a history of the great war I am now observing; a war which would save all future men, but which cannot, because of those lost ones of the forest whom we will never be able to search out—must reach future man!²²

CHAPTER XI

Battle to the Death

AT DISTANCES of a hundred miles and more the battle was joined at last. We surrounded the old fire-head,²³ ex-Elder Zeit, of Atlan in his center-Mu lair and succeeded in cutting him off without alarming Tean City or any other post so far as we could judge. We knew the dero would not use the destructive machines to kill the people

²² Judging from the information recorded by Plato, as received from Solon, it would seem that these metal plates so often mentioned by Mutan Mion (which this manuscript definitely states were deposited in many places both inside and upon the surface of this planet) were deposited about 12,000 years ago. Since such vast upheavals of nature as the sinking of Atlantis, the smashing down of the gates of the Pillars of Hercules and thus forming the Mediterranean Sea, have occurred, it would seem that the hiding places of these plates more than likely have been destroyed and rendered impossible of discovery. At least, science has no record of any such plates having been unearthed; nor is there any such record in legend or history beyond the possibility of the plates of the Ten Commandments given (found?) by Moses upon the mount. However this seems unlikely, since they are described as being of stone which seems true since they were smashed by Moses in his anger. Apparently the message over which Mutan Mion labored so mightily has never been found.—Ed.

without word from the old master of murder. And they would not get that word; for our ro sat astride every single cable of communication and held damper beams over every channel of telebeams.

But the old idiot himself was actively alarmed! Every weapon that one-time Atlan stronghold held was throwing fire and death through every boring we could approach him by. Nor-men died by the thousands (and they are not enamored of death for they have much to live for!) before we finally brought up enough shorter³⁴ ray to ground those tremendous flows of hell-fire from the

ancient generators. Zeit's hideout was a super arsenal!

Now our own needle rays concentrated on a single spot in the old fortress' metal walls. That metal, we knew, had been hardened in the past by subjecting it to exd flows of great strength.³⁵ It would resist most rays, but it was just a matter of throwing enough dis at a small enough opening point till the metal began to blaze and flow in a stream.

The opening grew larger, but the defenses of old Zeit were a long way from being pierced. Our own forces were protected both by conductive fans of rays which grounded any ray that threatened us and by flows of energy which were so strong that any ray that struck them was repelled or swept out of existence by the out-massing kinetic of the cone of force. But since these rays coned out at Elder Zeit's dero fortress on a level with its walls there was little overhead to protect us. It was an opening for Zeit and he took advantage of it!

FROM the towers of black metal suddenly sprang whirling comets; electrical vortices packed with howling energy in circular motion, which can be thrown in such a way that their circular motion causes them to describe an arc, for the same reason that a pitched ball curves. These arcing electronic cannonballs curved over our outflung protective wall and, striking our lines, bounced and leaped unpredictably from one point to another, searing everything within a dozen feet of their erratic path.

A few of these would not have mattered, since their behavior was uncontrollable, but they came flaming over by the thousands and set the whole army into confusion, dodging about, trying to guess where the howling, whirling, pausing, leaping things would

³³ The word "fire-head" used here does not mean that Zeit was a hothead, or impetuous, or any other similar modern meaning of the word. It has a deeper significance, denoting his mental condition. For a complete definition the reader is referred to footnote 17. Old Zeit's head, his brain, was infected by the ever-fire of the sun, and the infection was so derogatory to his thinking processes that the only possible result was detrimental thought culminating in murder, the most detrimental of all thoughts. The reader is here requested to note the word "derogatory," an accepted word of our English language, which has as its root the ancient Lemurian word "dero." Note that the ancient meaning has come down unchanged! -Ed.

³⁴ By the word "shorter" Mutan Mien does not mean the rays brought up were not as long, but that they were capable of "shorting" the energy flows from Zeit's generators. They must have been ionizing rays which served in much the same capacity as lightning rods, grounding the destructive beams hurled at the Nor-men before they were able to strike their target. -Ed.

³⁵ This principle of "hardening" metal and stone so that they become unbreachable (used to prevent the roofs of the cavern cities from collapsing) has been mentioned several times in this manuscript. It is accomplished by forcing additional eod (which the reader will remember is the ash of disintegrated matter, or more properly, the basic energy from which matter is again integrated) into the substance to be toughened until it reaches a state whose ultimate end would be what we today conceive of as neutronium. By adding more matter, packing it so to speak, into the interstices between the particles of matter, a greater density and therefore a greater cohesiveness is obtained. This cohesiveness is actually the "in-flow" of gravity. -Ed.

go next.

Since many of our men had to leave their controls to dodge the rolling fire, their retreat almost became a rout when old Zeit threw a hellishly dense concentration of dis on our protective fields, breaking it down before our remaining men could swing enough counter-force into action to neutralize it, burning down our grounding conductive rays; and boring a huge hole through our center.

As I watched in horror, my mind was unable to grasp this paradoxical truth. How is it that mere mechanisms can so rout intelligent men? The same intelligence built these machines, long ago. Now, seemingly, it confounds that intelligence, seeks to and almost succeeds in destroying its creator.

But our Nor giants had a few tricks left up their sleeves. I suspected that they had not been used because it had been unthinkable that the old devil of a dero Elder could have outreached us. Conductor rays soon dissipated the charges in the fireballs; an out-massing bank of force ray generators replaced the burned-out breach in our protective fields.

Now our men had time to carefully fine down the focus of our needle rays to a more and more concentrated beam of dis force. Then simultaneously placing all the needles on a predetermined point, usually at the base of the openings where Zeit's deros worked at their ray guns, they beat down the flashing black sweep of Zeit's counter-conductive concentration, . . . and his deros died at their controls.

THIS went on for hours as the dero were replaced by others under the devilish Elder's will—only to be killed again by the dancing, unpredictable needles of death which went through anything when they suddenly all swung

to one point.

All the time cutter needles gnawed steadily at the rock roof of the great bowl, directly over the ancient black-walled fortress. Chunks of the super-hardened rock rained down. It was tough stuff; tougher than steel. As soon as the artificially hardened surface of the rock was cut away the soft body of the rock above could be cut down in masses huge enough to cover the renegade Elder's hideout completely.

The walls and roof of the metal fort gave out great brazen clangings as the rocks fell from the height.

Still the fiery vortice spheres kept pouring from the black towers in steady streams, only to be caught by repeller beams and flung aside.

Force needles cut doggedly at the tower's sides and one by one they toppled with a great thunder of metal on metal and a fury of blazing-arc force from torn power cables.

Over the whole blazed a fiercely dancing flare of blue and purple flames from the clash of dis rays with the neutralizing fields. It was more and more evident that the end was approaching for the abandondero's feared master! A great exultance was growing in my heart as I foresaw the end which must soon come.

To corroborate my vision of nearing victory, interceptor ro of the false-answer communicators sent us a message that Zeit was calling wildly for help.

"Nothing is so pleasant," went the report, "as to sorrowfully tell him that we're unavoidably detained by pressing engagements."

But in my mind now came a darker, sobering thought. It was the thought wave of Vanue, impinging on my brain.

"What will his last effort be?" I heard her muse.

I had caught and repelled a couple of vortice balls on my beam that might

have approached her and had been dreaming of what form her reward might take—but now that thought left my mind. If Vanue had reason to worry of what Zeit might have up his sleeve as a last desperate gamble, I too had reason to be concerned.

I WATCHED the battle with more sober contemplation, peering ever for signs of some final development that might be dangerous.

Then as I watched for it came the thing that is always feared in battle; the unseen factor that suddenly upsets all calculation. From somewhere the dero had unearthed a tremendous levitator.⁸⁸ We ourselves had a few with us to get the heavy stuff over tough going; but this one was a monster,

⁸⁸ A levitator is a portable filter beam generator. Some of them are very small, and can be carried in the palm of a hand, or in the pocket. They were in common use for all tasks in Mu, and from Mr. Shaver comes the amazing statement that some of these portable levitators have been found in modern times and their secret use has given rise to the belief in the ability of "mediums" to use levitation of objects as one of their tricks in their seances. Perhaps most noted of these mediums was Mr. Daniel Dunglas Home, wizard, whose seances were the sensation of the United States and of Europe, the incredible recount of which was recently presented in "Magazine Digest." His feats of levitation are indisputable, being vouched for by such persons as Princess Pauline Metternich; Austrian Ambassador, Prince Joachim Murat; Mme. Jauvin d'Attainville. Home was born in Currie, near Edinburgh, on March 20, 1883. Among his abilities was the power to see events happening a great distance away; the ability to "elongate" his body as much as a foot; and at one time he caused Ward Cheney, silk-manufacturing titan, to be lifted three times into the air while he "palpitated from head to foot with contending emotions of fear and joy that choked his utterances." (The reader should note the amazing similarity to many of the mechanisms of ancient Mu—the emotional stim; the levitator; the tele.) It was after he became the darling of such figures as Napoleon III, Eugene of France, Alexander II of Russia, and Elizabeth Barrett Browning that he developed his "body elongation" trick and a still more sensational one wherein he placed his face among burning coals, bathing it as in water; without any sign of a burn. Is it possible that Home "discovered" his abilities in an ancient cave?—Ed.

once used in construction. This thing began lifting the masses of rock that had fallen on the fort, lifting them and dropping them from high in the air upon our lines.

Our own lifters were not big enough to handle the tremendous masses that kept dropping on our ranks and smashing the protective force-beam generators. When several of the generators had been crushed, the old devil used the master beam of the old fortress and bored through the openings, burning a path of destruction. Our whole enterprise was endangered—even faced total defeat!

I could bear Vanue's mind racing madly, "What to do? What to do?" And because of her confusion and anxiety, I knew how desperate our situation was indeed. Never had so great a fear filled my heart as I watched with staring eyes the havoc old Zeit was causing in our lines with his great super-ray.

As fast as our needle rays found the thing, new dero rushed in, moved it, went on with its deadly work. However, a concentration of conductor rays finally bored through to its base, shorted its vast power down to our size. Now we could handle it!

But our losses had mounted horribly. As I gazed upon the slaughter, I could not help but think that with our superior mental equipment all this should have been avoided. I am afraid there was criticism of our Nortan minds in my thoughts at this moment. . .

Vanue's thought came into strong being in my head, answering my unspoken denunciation.

"Detrimental force has an automatic electric play about it that strangely serves for thought. It is hard, no, impossible, to predict; as our healthy minds neutralize detrimental force, cannot therefore 'think' it. Too, in

these conditions, their teltaugs read our minds and our own imagination works against us. Healthy men are naturally too optimistic to foresee trouble fully. Then, beside that, no one knew or could know that the old fortress in here was so heavily equipped. Old Zeit nor any of his retainers have been out of the place for nearly a century. He kept the mech secret with very rigid care. People have gone into his fortress, but none have come out. The tunnels that lead down to this place are all too small to bring real war equipment down from the surface. We are really near the center of Mu. And on top of that, we have been a little over-confident, due to the unintelligent appearance of the dero. Who would expect such things 'to put up a fight?'

Her voice ceased in my mind, and I no longer fostered the thought that all this death could have been prevented. I felt a deep shame for even harboring the thought, and a deep gratitude for the favor she had bestowed on me in explaining so patiently even while she was in the midst of the greatest battle of her whole career. Such honor had never before been bestowed on a simple ro, I was sure.

NOW, as I returned to my contemplation of the battle, I saw that our sleeper beams were following our dis rays' openings in Zeit's force shields, but they seemed not to have the desired effect. The old ogre must have had some means to jerk his harried dero awake as fast as they dropped off. Possibly some type of stimulator ray—a clever use for stim, I thought; ordinarily they are for entertainment.

Finally, however, we swept the whole place with a concentration of dis rays and sleeper beams and the boulder-covered pile of horrors fell silent. A few beams still played from the heap, but

they were evidently automatic watch beams with no one awake behind them.

Our own lifters now cleared a path for our rollats to the doors. At last it was time to enter and mop up. As we went forward, I heard Vanue's ever-cautious mind warning me to "Watch out for the devil's joker" as our rollat-mounted rays moved up to the wall's lee and started blasting away at the doors. We rolled over the blazing mass of their remains and were inside. Atlan's leech had been loosened!

The place was three-deep in corpses. Many of them had been Atlan warriors; whether captives driven by Zeit's or his rodite's will or renegades I could not say. They lay at the white-hot projectors, their hands burned free of flesh, the bones still claspng the red-hot controls. Powerful indeed had been Zeit's ro compulsion.

We found the vast mountain of flesh that was ex-Elder Zeit of old Atlan. He was snoring among a mass of synchronizing rodite apparatus as big as a city block. It was both antique and modern in construction, much of it evidently salvaged from ancient ruins. Zeit was a three-hundred-footer, and he was not only big, but amazingly fat from his soft life in his hideout.

It was going to be a real job to get him to the surface alive. It would not be surprising if the soldiers found it necessary to take him apart and reassemble him later on.

The realization that we were going to move him to the surface was a surprise to me, because not to blast him into nothingness the instant we found him had seemed to me to be infinitely more than godlike emotional control in itself. But that that huge and evil head might contain technical secrets of value I realized when I thought of it.

We hound him with endless turns of steel cable, lifted him with a dozen of

our levitators, and started him floating along toward the surface. Before he arrived, I'll wager he scraped a few turns in a rather painful manner, and not by accident either!

OTHER things we found in old Zeit's fortress—things that horrified us. He had had a couple of dozen Elder captives. It is one thing to see a broken man of my size, but to see the living remains of a Goddess Elder broken by torture until she had become a whimpering, cringing, babbling thing to pity did not quiet the rage in my breast, rage that I could see and feel burning in the Nor-men around me.

There were many captives still living, of all sizes, many women and girls—but most of them were in horrible shape from their treatment, and the others nearly insane from waiting for the same torture. I saw the endless variations on the torture theme old Zeit had devised to amuse himself in the centuries he had spent hiding in this place—as we recorded it on the thought record from his ro's minds.

I was placed as a guard over some of the antique equipment reserved by Vanue for her research. As I stood there, I could read the thoughts of many of the Elders who passed by after having viewed the gibbering things Zeit had made of Atlan men, women and Elders. I knew that if what they were thinking ever came to pass, Zeit would receive the equivalent of his tortures in Nor before he died—if he were allowed to die!

Now that the battle was over, more important Nor Elders arrived. Vanue's father was among them, and I heard him speak to a comrade. Vanue stood beside him as he spoke, listening as I did.

"I see that exile for him was a large Atlan mistake. To humble the exalted and to release them to work out their

revenge at leisure is to create a devil and give him leave to harm you. These Elders he has been so lavishly entertaining in so terrible a way are the very ones who sat at the council which expelled him. Obviously they were a bit too gentle with a monster who sold his own people as slaves and got caught at it."

Vanue turned briefly to me, and once again I discovered how close she kept track of me.

"Zeit's joker never materialized, Mutan . . . and your reward for diverting the vortice balls will not be forgotten. It is a good religion, the word 'reward'.⁴⁷ Do not forget it."

There is a peace about being read by an understanding mind. Vanue would always know my intent toward her. I was her ro, until someday I would graduate into true self-determination. It was enough.

"TEAN CITY still to take," I was thinking aloud a few minutes later, and suddenly realized that Arl, somewhere in the fortress, operating her telescreen beam, had been secretly watching me—for her voice sounded in my ear in answer.

"They got wind of what happened some way. Missing messengers, false reports exposed, or something. Anyway, they loaded up some of the finished migration ships, destroyed the

⁴⁷ This reference to the word "reward" as a religion is mystifying, and Mr. Shaver has never explained it. However, our thought on it is what might be termed the basis for all religions—the incentive to do good because of the hope of a reward of some kind. This seems the correct view when we consider Vanue's insistence that a service of good is never left unrewarded. It is logical to believe that loyalty would remain constant so long as the reward always certainly comes as a consequence of each demonstration of that loyalty. If nothing else, Vanue was an excellent psychologist, and a brilliant leader. Also she protected, as well as rewarded, as her reference to the "joker" demonstrates.—Ed.

rest, and took off. But I would say the abandondero migration has been too long delayed just as was the Atlans'—the Nor fleet will hunt them down like rats."

Hovering in the air before me her face appeared, materialized by tele-projection, and she bent forward and gave me a kiss with *full* augmentation. I reeled from the vital charge and nearly fell, but wound up on my knees asking for more. She went on speaking as if the tremendous kiss she had given were a nothing.

"They just made it, too. They used to wipe out the Tean City population, but our men were entering from the lifts and from the tubes and laid down a blanket of conductive till none of the police corrective ray about the city would function at all. With the exception of the rockets on the ships, none of their mech would work.

"I think the Nor-men let them operate the lifter beams and the rockets to get them out into space where they can't hurt anyone."

And now Arl gave me the encore I had been begging for—but while she had been talking she had coupled on a booster circuit and the resulting kiss stretched me flat on the ground with a bump on my head as big as a dodo's egg.

I got to my feet to find her image gone, and the faint echo of her laugh still in my ears. I wondered if the influence of the Nor maids hadn't made her just a little bit independent . . . ? But it was worth it!

A FEW days later and Mu had been cleaned up. The victorious Nortan armies set up a temporary council of surviving Elders, who were few enough, to act in place of the real government that had not existed on Mu for nearly a century because of the coup of old Zeit. This council decided to take Nor advice and start building a home in a cold planet, far from any sun's evil influence.

A planet with untouched coal deposits located near the Nortan group of planets was chosen as the Atlans of Mu's new home. Work ro were dispatched to commence borings into the planet and to begin building the huge, steam heated, ray-drenched greenhouses in which Nor-men live and know so well how to build.

In a few short months the first ships took off for New Mu, and the last of the race of Atlan soon followed, abandoning Mu for their new home in space. Arl and I remained on Mu to the last. During this time I finished my telonion message plates and distributed them in the most likely places both in and on the surface of Mu. I pray that the descendants of those few wild men I have seen in the culture forests but have been unable to approach, may someday find these plates and have the sense to read them and heed their message. Someday, I have a feeling, they will be a race of men again. It is good seed they inherit, and they might be worth my effort in spite of the sun.

I pray that when they find the plates they will understand!

WATCH FOR THE NEXT STORY IN THIS LEMURIAN SERIES!

The June issue of *Amazing Stories* will contain the second manuscript of Lemuria's past, from the strange "memory" of Richard S. Shaver! In this one he will give you the true story of his descent into a city in the Earth's

depths where descendants of the ancient inhabitants still live! In addition, a second manuscript which is actually a *corroborative* story that came to him from the underground city of Hel, in Norway, only months ago!

MANTONG

The Language of Lemuria

IN OUR January, 1944 issue we published an alphabet supposed to be that of the Lemurian language. Semantically inclined readers discovered that it had an amazing adaptability to many languages. Since then, further work has been done and we believe we have something that may prove of great value in advancing man's knowledge of his past and may even reveal many lost scientific secrets.

This language came to us from Richard S. Shaver, author of the startling racial memory story, "I Remember Lemuria!" in this issue, and forms a part of his story.

We have discovered that the alphabet is to be taken phonetically, rather than literally, and that it is probably incomplete. Also we have found that the letters are used in combination with simple root words (phonetically the same in all languages) in making up words of the Lemurian language. Through this process we have discovered Lemurian words in thirteen different languages.

We now make a plea to our readers who are interested in semantics to do research work on their own, and report results to us, to aid in further compiling the dictionary of the Lemurian language which Mr. Shaver has begun. Mr. Shaver has used only the English language, and has listed some 400 words which seem to have a Lemurian derivation, judging from an application of the alphabet and root words in an attempt to reveal their ancient meaning.

On this page we will reproduce the original alphabet. Also, we will reproduce a selection of words from Mr. Shaver's dictionary to illustrate the means used in making such compilations. But first we will give a few concrete examples and a few of the principles.

Lemurian meanings can be discovered in words which are not modern or "coined." For instance, "five" is instantly rejected as having a possible Lemurian meaning for obvious reasons. But "acid" is a word that may be considered a "character member" of the English language, having a usage of many centuries. Applying the Lemurian alphabet and root words, we get: A—animal; C—see; I—I; D—disintegrate. Animal see I disintegrate. Which is perfectly descriptive of the word acid. It was a warning word, and meant literally the same as the word poison. It warned animal life of its power to harm by disintegrating. In the word "amass," the letter A means animal, and the word "mass" means just what it does in English. So to amass is descriptive of an animal who gathers together a large quantity of anything.

Note that the key revealed by Mr. Shaver uses both the basic "letters" and basic "words," in a phonetic sense. In this phonetic sense, any language can be examined even without great proficiency in the language. If it can be correctly pronounced, its Lemurian meaning can be reconstructed. It is pointed out that the Lemurian meanings in many instances are the same as the actual language meaning—but that in many more instances, a meaning at variance is obtained. It has been inevitable that many words have become distorted, even unrecognizable, through the thousands of years since Lemuria.

We may have the key to man's past here; help us to unlock it. It may be that many ancient writings can be re-translated, and an entirely different meaning found in them. Translators of ancient writings have been too prone to "imagine" meanings to words in an old text which has made sense, but has been entirely misleading as to the point being made by the original writer.

Rap.

Mr. Shaver's Lemurian Alphabet

- A—Animal (used AN for short)
- B—Be (to exist—often command)
- C—See
- D—(also used DE) Disintegrant energy; Detrimental (most important symbol in language)
- E—Energy (as all concept, including motion)
- F—Fecund (use FE as in female—fecund man)
- G—Generate (used GEN)
- H—Human (some doubt on this one)
- I—Self; Ego (same as our I)
- J—(see G) (same as generate)
- K—Kinetic (force of motion)
- L—Life
- M—Man
- N—Child; Spore; Seed (as niny)
- O—Orifice (a source concept)
- P—Power
- Q—Quest (as question)
- R—(used as AR) Horror (symbol of dangerous quantity of dis force in the object)
- S—(SIS) (an important symbol of the sun)
- T—(used as TE) (the most important symbol; origin of the cross symbol) Integration; Force of growth (the intake of T is cause of gravity; the force is T; tie means science of growth; remains as credit word)
- U—You
- V—Vital (used as VI) (the stuff Mesmer calls animal magnetism; sex appeal)
- W—Will

(Concluded on page 206)

THE MARTIAN'S



The artist drew back the veil over his masterpiece

MASTERPIECE

By Sgt. MORRIS J. STEELE

NO ONE was going to push Ellen around; if she wanted to be an artist's model, she would, no matter who, or what, the artist was

"TAKE your choice," he said flatly, "me or the career!" She looked at him for one shocked instant; then she blazed. "All right; the career, Jack Martin! If you think you can order me around like *that*, just because I love you . . ."

"Do you, Ellen?" he questioned.

"Of course I . . ." For one enlightening moment she was looking at him wide-eyed, then suddenly she wormed her way into his arms and lifted her lips to be kissed. There was a

warm, forgiving light in her brown eyes. "Don't let's fight, Jackie," she said. "Come, kiss me, and admit my spending a few hours a day being a cover girl won't interfere with our marriage at all. You'll be working at the time, anyway . . ."

"What about that Hollywood idea?" he demanded. "What if that should happen? I'd be the first to admit a scout might think you beautiful enough to put onto celluloid. What if . . ."

"Silly," she chided. "Time enough



to talk about that when and if it happens."

"Meaning you think it *might* happen?"

She shrugged. "Could be. But why count our chickens . . ."

He kissed her at last, then turned, picked up his hat from the table and walked toward the door. Once there he paused to look back at her shocked face. "They're *your* chickens, Ellen," he reminded firmly. "You'll have to do the counting. Loving you is had enough without rushing into a marriage that wouldn't pan out. I can't hold two jobs, and neither could you. If, after thinking it over, you agree . . ."

Abruptly he was gone.

"Oh!" she said. "Oh!" With all the fury she was capable of, she picked up a magazine and hurled it at the now closed door. It fell to the floor with a thud and slowly the front cover fluttered back into place. On it a reproduction of her own lovely face looked back up at her, provocatively, enticingly, promisingly.

A moment she looked at it, then her lips tightened and stopped the quivering that had begun to conquer them. She stepped to the phone to dial a number . . . "Peter," she spoke into the transmitter finally, "I think I'd like to pose again today . . . Rightie. In an hour . . ."

HE HELD the brush away from the canvas for a long moment, then with amazing and infinite delicacy made several swift strokes. He uttered a pleased murmur, put his brush down and moved back to survey his work with a critical eye that seemed indisposed to offer any criticism. It was perfectly obvious that The Artist was delighted with his work.

"It will be my masterpiece!" he exclaimed.

He turned and surveyed the carpeted dais whereon his model sat, still holding her pose, paying no attention to him. She was thinking; and momentarily a frown knitted her brow into furrows.

The Artist observed it with disapproval.

"No!" he said, almost as though it were an analytical criticism on a new phenomenon. "That is not right!"

Her brow smoothed out again and she went on posing with an unmoving steadiness that brought admiration back to the face of The Artist.

"You are a wonderful thing!" he breathed. "Yes, this will be my masterpiece, and all who see it will sing my praises. I shall be a world's most acclaimed artist . . ."

She seemed unperturbed by the egotistic intonation in his voice, seemed even to be unaware that he was speaking. Modeling was so much easier just thinking of other things and keeping mind and eyes and ears free of distractions in the studio . . .

The Artist moved around and did mysterious things with mysterious lights. For long moments he studied the effects of one set of lights and shadows on the model's nude body, then he changed the lights again. Another period of study and he seemed satisfied. His face bore just a bit of calculation as though he considered yet another change, then abandoned the idea because he himself was unsure of the exact effect he wanted.

After all, this was no ordinary subject. There were things here that were new to the art of painting. . . .

VERY carefully Peter Van Zyle passed the tip of the brush over a section of the canvas. Just an infinitesimal dash of paint, hut . . .

"Nuts!" he said. He said it so emphatically that Ellen broke her pose for

once and stared at him from her carpeted dais.

"What's the matter, Peter?"

"It's those lights," he complained. "I'll swear you are just about the best model I've ever had, and it's the Eighth Wonder of the World how you sit so still; yet, every time I get a shadow painted in, it's changed the next time I look! I'm actually getting cockeyed trying to put in one little brush stroke that should be as simple as . . . Well, it should be simple, that's all!"

"Why don't you change the lights a bit?" she suggested.

"I've changed them a dozen times," he said. "It isn't that. Maybe what I need's a drink . . ."

Ellen got up from the dais, walked out of the light circle beneath the skylight, and vanished in the shadows . . .

THE Artist watched her go, then reluctantly put his brush and palette down, and seated himself in reflective thought. He watched as she came back out of the shadows, knotting the cord of her robe around her waist. He frowned.

"Why do you do that?" he asked, almost petulantly.

She paid no attention to him; but it seemed she was disturbed by his eyes on her as she moved over to a dimly-seen cupboard to the side and did something with objects that flashed with reflected light, for her cheeks were red with self-consciousness.

She came back, held out a small glass.

He didn't offer to take it, so for an instant she stood there, while her cheeks flamed redly, then she turned back to the dais, put the glass on a little tea-table and sat down facing The Artist.

"Amazing," he said admiringly as he observed the wonder of her flaming cheeks. "Such a delicate color—the royal color of colors, but more delicate

than anything even the vast deserts produce! Ah, it is that I wish to capture in those shadows! Color will help much to make this the most beautiful painting I have ever done. My friends will not believe the model is real, but I can prove it to them. Yes, it can be proved!"

Perhaps she missed the implication in his words, because she seemed not to be puzzled by what he meant; and then again perhaps she did because she turned her gaze toward the painting, pretended to study it with great intensity.

The Artist turned too, to study it. His eyes roved over the exotic curves of her painted figure, following each outline with what almost amounted to gloating satisfaction. It was as though they were lines that he had seen only rarely, if ever, before—which was strange, because he was The Artist. Millions had marveled at his paintings the planet over.

True, he had not specialized in the sort of thing he was now painting. Landscapes had been his forte. Weird, uncanny landscapes that had graced many a gallery. It was even said that some, so strongly affected were they by the illusions created by his masterful brush, had killed themselves before the paintings . . .

PETER VAN ZYLE returned his gaze to Ellen as she sat, her cheeks less red now. He chuckled and came over to the dais and sat down beside her.

"Oh, come," he protested. "Only one drink? Have one yourself. It'll still the little gremlins that try to make you move when you are posing. I feel like a heel, making you pose this long; but I must get those shadows in right . . ."

Ellen looked at him, then she smiled.

"Are all artists that way?" she asked.

"What way?"

"Well . . . oh, maybe it's just me. But really, sometimes I think you artists never get used to seeing their models . . . in the . . ."

He looked at her slyly. "Isn't it you who is . . . er . . . after all, it was you who scampered for cover after sitting here unperturbed for an hour."

"Oh, but that's different," she said quickly. "And besides, you said . . ."

"Said what?"

A peculiar look came into her eyes, and for an instant she was confused, as if she couldn't remember exactly what he *had* said. "You said I . . . it was the Eighth Wonder of the World . . ."

He frowned. What was it she *thought* he'd said? Obviously this "Eighth Wonder" stuff was a substitution to cover up what she had originally intended to say. Or else she was acting coy. Well, there was only one reason a girl acted coy . . .

He put his arms around her and kissed her on the lips.

"You *are* the Eighth Wonder of the World!" he breathed.

She struggled slightly and he released her.

"I meant no offense," he put in tactfully. "After all, even an artist is human. I thought you wanted more than words to . . . well, that kiss was a compliment as much as what I said about your posing."

She seemed to be more thoughtful than offended, as though she were considering something, weighing something in her mind. He watched her carefully.

It was true. She was thinking—about Jack Martin; and the thought made her mad. "Thank you," she said at last. "But let's let it go at that—for now?" Her eyes dropped, and her fingers traced their way along the design in the carpet; while his eyebrows lifted with interest.

"What else?" he asked, waving a hand expressively. Then he added: "How about calling it quits for today? You've been very patient. Maybe tomorrow I can get that shadow in a moment."

She smiled agreement, got to her feet and walked behind the screen to dress . . .

THE painting was finished. The artist looked speculatively at the unsuspecting faces of his friends, gathered in his studio for the unveiling. Then he looked at the draped easel itself. As he looked, the feeling of exultance and anticipation he always felt when he was about to expose a sensational painting to his admirers' inspection grew in him. How their eyes would bulge out when they saw this one!

"Is this another landscape?" asked one.

The Artist snorted. Even his voice became egotistically tolerant. "No, my friend, not a landscape this time! Suicides will make no news over this one!"

The friend looked disappointed. It was obvious that he was one of those bloodthirsty individuals who love the macabre because of the odor of death that always surrounds it. "You mean you've deserted your favorite theme?"

"Yes. This time I have painted from Life, not Death."

Another of the group looked interested. "It will be a deadly sort of life, I'll wager," he offered.

"Wrong again! This time I have painted the ultimate in Beauty. In fact, I will say that she is the most beautiful thing in all creation!"

A stir of excitement went over the assemblage.

"It sounds almost incredible!" exclaimed a third admirer. "You have always painted the ugliest, most horror-inspiring paintings; the most chilling

this world has ever seen. I, for one, will have to deliberate long to decide whether you have accomplished the opposite. If, as you say, you have painted from life, I probably know the female personally—and frankly, I can remember no such dazzling beauty as you imply; unless your brush can work the same magic complementarily that it can adversely."

The Artist chuckled. "Ever the egotist! You don't know as many females as you would have us believe! I will be much interested in the Great Lover's reaction to my painting!"

A clamor broke out. "Unveil, then! What are we waiting for?"

The Artist gloated. He had aroused their curiosity. The stage was set. How he loved these dramatic unveilings . . .

He drew back the drapery and moved aside, his gleaming eyes fixed on the faces of his friends in leering anticipation.

He was not unrewarded. From the lips of all assembled there came a gasp, a choked exclamation, a long sigh—and finally, utterances of incredulity.

"From life, you say!" breathed the Great Lover. "Impossible! She is a figment of your imagination. Nothing real could be as beautiful as she!"

The Artist smiled. "Then you would say that this is my masterpiece?" he insinuated.

A chorus of agreement arose from all, but it was overridden almost instantly by the belief the Great Lover had expressed. "You didn't paint *her* from life! She cannot exist!"

"Do you challenge me to produce her?"

The Great Lover stared at The Artist. "Yes," he breathed hoarsely. "I, for one, do challenge you! And even though I am sure you will not produce this . . ." he gasped, ". . . this model, I pray fervently that I am wrong—because if

you *do* produce her . . . !"

The Artist looked at his friend calculatingly, then he grinned in anticipation. "This is *one* time I will watch the talent of the Great Lover with interest!" he declared. He motioned decisively. "Come back, all of you, tomorrow at the same time. I will have the model here for you then—and I promise that I will introduce her to each of you!"

"Good!" chorused from the throats of all present. "We will be here!" They filed out of the studio with mixed expressions of anticipation and incredulity . . .

THE phone bell rang and Ellen answered it. "Oh, hello Peter . . . you've unveiled the painting! How did they like . . . wonderful! Peter, I'm so glad . . . Beautiful, they said? Finest you've ever done . . . You want me to come over tomorrow afternoon . . . a little surprise? Peter, what is it? Don't keep me in suspense . . . Oh—all right, I'll come—but I think it's mean of you not to tell me what . . . Goodbye, Peter."

When Ellen hung up the receiver, thoughts were already thronging through her head. Thoughts of Hollywood, Powers models, a cover on *Sat-evepost* . . . What could Peter's surprise be?

The hours passed slowly—but at last they measured out a rosy-dream filled night and a day-dream filled morning on into afternoon.

Ellen reached the studio before Peter, and had to wait, but she found the door unlocked and walked in. Upstairs, in the studio, she stood for long moments before the unveiled painting, admiring it. There was no doubt of it—Peter had done something fine here. Perhaps she had been wrong in the uncomplimentary thoughts that had occasionally

come into her head concerning Peter. This was proof, wasn't it, that those thoughts had been unjustified? Peter was a real artist.

He came in now; and there was a triumphant smile on his face. He had a large box under one arm, and waved a telegram in the other hand.

"Look at this, kid!" he said. "Here's where we go to town. Stick to me, Ellen, and you'll be the nation's most-loved cover darling . . ." He paused, and added, ". . . my cover darling."

Ellen had already gotten the gist of the telegram, so she didn't hear his last words at all, or if she did, they meant nothing.

"Oh!" she squealed. "A year's contract, with . . . Peter!"

He jumped at the pitch of her voice. "My God, what?" he gasped.

"I'll be on thousands of billboards all over the country!"

He looked less startled and more pleased with her enthusiasm now, and a calculating gleam came into his eyes. "Sure, baby. You just cotton to me, and we'll make bright colors together!"

He was husy opening the box now, and he was talking as he did it. "Let's not waste any time. Let's get right to work on that first billboard! Look, kid . . . roses!"

He piled a huge bunch of American Beauty roses in her arms. "But first, how about a drink of the stuff these roses, and you, are going to advertise?"

She hesitated a moment, then nodded. "Yes . . . but just a little one. And while you're getting it, I'll get ready to pose. Oh, I'm so excited . . ."

Peter grinned slowly as he watched her put the roses down on the dais and scamper behind the screen. He picked up the telegram and crumpled it into a ball and shoved it into his pocket. "Now we're getting somewhere!" he whispered. He went to get the "re-

laxer" from the cabinet in the shadows.

Ellen came from behind the screen, draping her robe about her. She accepted the "little one" he gave her, drank it with a grimace. He laughed, tossed down his own drink, then motioned toward the dais.

"I'm ready if you are," he said.

Ten minutes later Ellen was doing her brave best to pose unflinchingly while holding the bunch of roses in her arms; but the thorns proved a problem she hadn't quite expected, and already she was wishing mightily that Peter would give her a rest. She kept glancing at him hopefully as he painted, but he seemed absorbed in his work.

Inwardly he was smiling in satisfaction to himself. Just a few more minutes . . .

The front door bell on the lower floor tinkled. Peter looked up annoyed. Ellen straightened up, dropped the roses thankfully. "Better answer it, Peter," she suggested in relief. "I'll rest till you get back."

He left the studio, lips tight with annoyance, and went down the stairs. He didn't see the glowing radiance that grew about Ellen's nude body, still standing on the dais . . . Ellen scarcely noticed it either, as she stretched luxuriously, but her eyes snapped open quickly when she felt a pair of arms steal around her waist. Indignation flooded through her and she turned swiftly, her palm open to administer a stinging slap.

But she didn't slap anyone. Instead she very quietly fainted . . .

THE Artist roared with laughter. "So, that is how the Great Lover effects the loveliest female this planet has ever seen! She faints in his loving embrace!"

"From sheer emotion, no doubt," said the Great Lover complacently, sneezing lightly. He looked a trifle annoyed,

wrinkled his nose, sneezed again.

The Artist snorted. "If ever there was horror registered on a female face, there was horror on hers!" He wrinkled his upper lip violently and rubbed his nose. Then he sneezed explosively.

The Great Lover looked down at the girl in his tentacles and his eyes watered. He frowned. "She is lovely," he said, "but perhaps she might be better off if someone told her . . ." A series of sneezes rocked his body and he dropped the girl to the dais floor where she lay amid the roses strewn about.

"Ah!" exclaimed The Artist. "The Death of Beauty! My next masterpiece! I shall paint her that way, lying amid those strange flowers!" A wave of sneezes from the group in the studio drowned out his last words, and heralded the sneezes he himself began to loose.

The Great Lover staggered, wavered across the room, his eyes streaming. There was agony on his face and the poignancy of it shocked the others into a sudden, unreasoning terror.

"I am poisoned!" screamed the Great Lover. "*Gods of Mars, I am dying!*" He fell to the floor, his tentacles thrashing violently, while he sneezed and coughed in a terrible clutching spasm.

Before the horrified eyes of The Artist and the others, a horrible slime began to ooze from his nose and lips, and his face grew red and ulcerous. Awful, ear-offending burblings and gurglings came from his froth-flecked lips, and his screams became horrid bubbling noises without semblance of words.

The Artist felt a wracking, burning sensation in his throat, his nostrils, his mouth. He gasped for breath, but did not scream. Instead he fought his way through the panic-ridden milling of his friends, who now were experiencing swift-growing agonies that were spreading with terrifying rapidity through

their entire respirative systems.

His goal was a mechanism that stood at the opposite end of the room—a mechanism of gadgets and dials and tubes and coils, all focused on the dais whereon the inert nude body of the model lay amidst the scattered American Beauty roses.

Screams of agony, moans of the dying, rent the air. The Artist, his face contorted, brutally crushed down a gasping friend, trod on him as he forced his agonized way toward the mechanism.

"The flowers!" his frothing lips were mumbling. "It is the flowers . . . not the . . . the female . . . fever . . . malignant fever . . . from another . . . another world . . . got to send them . . . back!"

A wave of blackness was sweeping over him as he collapsed before the mechanism. With one last desperate heave he lashed out a tentacle, brought it smashing down on a lever. There was a flash of radiance, then a still brighter flash as the mechanism tumbled to the floor, burst into flame. The whole room burst into flame, white radiant tongues of it licking out toward the dais—which was empty of either girl or roses . . .

ELLEN felt arms around her, lifting her, felt lips pressing against her neck.

"Ellen!" she heard a whisper. "Ellen, darling, I love you . . ."

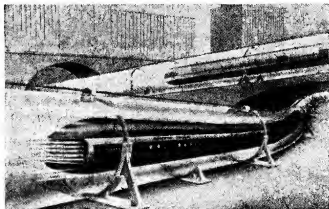
She struggled erect, filled with utterable horror and loathing, lashed out with a palm that connected—squarely on the cheek of Jack Martin!

Incredulously she stared at him.

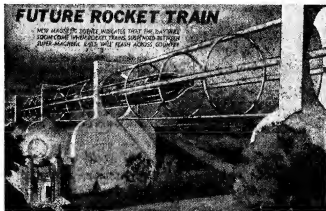
"Jackie!" she cried, brokenly. Then she rushed into his arms. "Oh, Jackie, what a horrible monster . . ."

Jack Martin laughed scornfully. "I wouldn't exactly call him a monster,

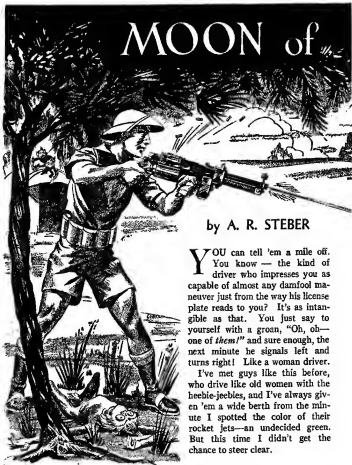
AN AMAZING BACK COVER COMING TRUE?



Acme Newspictures, Inc., recently released the above illustration of a rocket train of tomorrow, as seriously planned by New York scientists and engineers. This train, it is said, is already on the drawing board for future planning. Below is a similar train, powered electronically by exactly the same scientific principle, which was pictured on the back cover of *Amazing Stories* for January, 1939. Fiction scientists can see ahead!



MOON of



by A. R. STEBER

YOU can tell 'em a mile off. You know — the kind of driver who impresses you as capable of almost any damfool maneuver just from the way his license plate reads to you? It's as intangible as that. You just say to yourself with a groan, "Oh, oh—one of *them*!" and sure enough, the next minute he signals left and turns right! Like a woman driver.

I've met guys like this before, who drive like old women with the heebie-jeebies, and I've always given 'em a wide berth from the minute I spotted the color of their rocket jets—an undecided green. But this time I didn't get the chance to steer clear.

Somewhere on this tiny world was a vast treasure—but where? There were monkeys, bock beer, Harvard gentlemen, too—but that didn't make sense!

DOUBLE TROUBLE



I gave them the whole clip, and several of the howling devils went down, and the rest pulled up...

I was just taking off from the runway of the Trenton Spaceport—all set for another prospecting trip to one of Jupe's moons—and I had the green bands all the way from jet-pit to hellangone. I saw this guy sort of hovering off at an angle, apparently going to make his sweep back around behind and come up the runway like I was; but suddenly it hit me the way I just mentioned—I *knew* he was gonna spurt out right into my band. And he did!

Well, no use playing up the details. These things gripe me too much. Anyway, I wound up with the nose of my buggy accordioined against a concrete flash wall next to the adjoining take-off lane. It was either that or hit the damfool right in the fuel tanks—and that can be messy!

So I didn't take-off!

Instead I sat there swearing a blue streak, watching that lousy son of hell



rocketing up toward the zenith as if he had all heaven to play around in. I doubt if the jackass even knew I was behind him.

I guess, though, you gotta make ex-

cuses for guys like this, because after all, if they ain't got brains, it isn't logical to expect 'em to use their heads. The only thing is, I say again, keep outa their way. Steer clear. If you can!

So that's how come I'm cooling my heels waiting for repairs to my buggy which have taken two days. Not that I'm in any special hurry . . . what's up there among Jupe's moons is a secret only I and one other guy know, or knew, because he's dead now.

I picked him up some weeks ago on Eros where he'd cracked up. He was outa his head most of the time before he died, and I never did reach Luna City with him alive. But I guess it was a break for me, even if it was tough for him. What he told me is going to mean plenty, if it's anywhere near true.

I ain't gonna say just what it was—jet-pits have walls, and walls have ears. But there were a few things he said I can tell you . . . just to give you an idea of how screwy the whole set-up is, and explain why it just ain't common sense for me to go blowing off steam right now. Nothing makes a guy look sillier than to find out he's advertised a pig and all he's got is a poke in the end . . .

For instance, the daffiest of them all is the one about monkeys from Harvard. Yeah, that's what he babbled in his deliriums. Monkeys from Harvard and they were perfect gentleman—because they'd never hit a lady!

And Bock Beer was their god! Whose god? The monkeys', I guess. I couldn't get it straight from the poor dying devil. Bock Beer; monkeys; Harvard gentlemen; never hit a lady . . .

Anyway, you get the idea. Maybe all the rest of the stuff he told me was so much fever-dreams too. Even his name; Pete, the Camper, it sounded like he called himself. Maybe a nick-

name because he camped out so much, or something. So I'm keeping my mouth shut. But just the same, I'm gonna find out. I'm going to this place and have a look-see. That is, I *was*, until that multi-dimwit scoots out in front of me! Now I'm delayed two days, and I'm plenty impatient already. You'd be too, if you knew the rest of the stuff that came from that old guy's lips.

Oh hell, guess I'll go down and have a couple of beers. It'll be two more hours before I can take-off.

* * *

"PAPER, mister?"

I looked up from my beer.

"Sure, kid. I'll take one."

I flipped the youngster a dime and waved him away when he started fumbling ostentatiously for change. The headlines were the usual thing, but I read everything right down to the back page. One headline stopped me for a minute. I'm interested in chemistry anyway—one reason why one of the things the old guy told me stuck in my noodle—so I read the item to the end.

New York, October 12. (IP).—Dr. William P. Donnegal, organo-metallurgist, declared today that rocket travel faces serious disruption because of the exhaustion of tellurium-x resources. Tellurium-x, the isotope of tellurium* which forms the basis of tetrachloride tellurium rocket fuel, is rapidly being used up and within two years, says Dr. Donnegal, none will be left. Unless more

*Tellurium belongs to the same family as sulfur. It is obtained as a by-product in the electrolytic refining of copper and lead, being extracted from the anode sludge. It is a brittle, silvery white, metallic substance. Its specific gravity is 6.27, it melts at 452°C and boils at 1,390°C. Its hardness is 2.3. It crystallizes in hexagonal-rhombohedral prisms and is isomorphous with the stable grey modification of selenium. It is rarely found as a native element. Its compound, as tetrachloride, is a snow-white crystalline mass. It is this form that provides the base for tetrachloride tellurium used as an antitoxant in rocket fuels of the liquid oxygen-hydrogen type. Without this compound, rocket travel would be impossible.—En.

deposits are discovered, or a substitute devised, such an exhaustion would eventually mean the complete stoppage of rocket travel. Ordinary compounds of tellurium are not satisfactory as an antidetonant in rocket fuels.

Maybe that don't mean much to most people, but it does to me. It would mean the end of my prospecting, for instance, and besides, I kinda like batting around the solar system. Rocket travel is meat and bread to me. I've ridden the old type rockets, which were as bad as the old internal combustion motors on autos—without tetraethyl lead in the gasoline. Never know when the damn thing's going to blow up in your face!

I tossed the paper aside and finished my beer. Then I strolled outside. I figured by the time I walked back to the spaceport, my buggy'd be ready to blast off. I began to burn up again as I thought of the jerko who'd caused this two-day delay; it would mean I'd have to bust my think-tank wide open figuring out new trajectories and blasting a new course to my destination—no I ain't telling yet where it is!

Navigating the void is a ticklish proposition. A ship's tanks can carry only so much fuel, and a hell of a lot of it is used in blasting off. The rest of the trip is largely just steering blasts and coasting; so if the course is wrong, the net result is a new expenditure of fuel in correcting. That sort of thing might just use up enough fuel to get into difficulty on landing, or—as the case is in this exploring business — on making home port again on the return trip. If you ever find yourself hurtling like hell-fire toward a big planet and realize that you haven't enough fuel in the tanks to stop your ship before you crash, you'll get what I mean. You'll wish you'd figured your course a little differently!

I began to go over the figures mentally, and as a result, by the time I reached the spaceport, I was getting red

in the face. A stubbed toe would have touched me off in a blast of cuss words.

"Hello, Joe," I said sourly to the despatcher. "Did they get my crate out into the chutes yet?"

"Yeah. Nice new shiny nose on her! Looks like a new ship from the front . . . oh, by the way, here's a radiogram for you. At least the name on it is *Sky-hopper* and that crate is listed under Bill Wallace. Came from the *Lilybelle*."

"*Lilybelle*?" I asked. "Who's she?"

The despatcher grinned at me. "That's the ship that took off before you just before you drove your buggy against the flash wall."

"I didn't drive it there," I said indignantly. "That lousy son of a heel waltzed right out in front of me, and I had to take the wall or his tanks. So I took the wall."

"That musta been it," agreed the despatcher. "Maybe this's an apology. Can't imagine what else it'd be."

"Naturally," I said. "Nobody but a dope wouldn't realize he'd done a lousy stunt in choking me off. But it'll take more than an apology to cool me down. What about the dough those repairs are gonna cost me?"

"To say nothing of fixing up the flash wall," reminded Joe.

I tore the envelope open viciously and unfolded the radiogram.

"Yeah, what about that?" I agreed. I read the radiogram. It was brief and to the point.

Next time we meet, I'm going to pull your nose off and stuff it. Don't you know it isn't polite to push? Better learn to stay a safe distance behind, and better still, quit driving a space ship until you get out of short pants. You nearly crashed my fuel tanks!

I crumpled the radiogram in my fist and threw it on the floor. I was boiling!

"Joe!" I howled. "Get my clearance

paper through as fast as you can. Just as soon as I get past the censor area, I'm going to tell this baby where to get off at! The nerve of the guy! If I ever meet him, I'll murder him, so help me!"

"What'd he say?" queried Joe.

"Say! He said it ain't polite to *push*! He said I oughta quit driving until I get outa short pants! He said I nearly crashed *his* fuel tanks. . . !"

"Well, didn't you?"

"*Didn't I . . . ?*" The world blew up in red smoke. "Joe," I screamed. "Put up your dukes. I ain't gonna take that from nobody, even you . . ."

TEN minutes later I was trying to line up the open lane through one eye. Joe is pretty good with his dukes, and I can hardly blame him for defending himself. But he ought'a let me hit him just once. It might have cooled me off even more than this shiner I got.

Peering ahead, I saw the green bands, and juiced the rockets gently. The ship began to rush down the lines, and the jet-pit behind got full of flame and smoke. I squirted out of it, into the take-off lane, and juiced her some more. The pressure of acceleration pushed me back into my seat hard. I was feeding the detonators full.

Pressing the take-off this way is a bit tough on fuel, but I had some to spare. It's tough, too, on the old carcass, but I didn't mind that. I wanted to get out beyond the censor limit and call the *Lilybelle*, if I could raise her. I was itching to unload on that smart aleck.

Two hours passed. And all the time I was getting hotter under the collar. Just the thought of that radiogram was fuel to the flames. So when the speedometer showed I was beyond the ten-thousand-mile radio limit, I snapped my sender on and let her heat up. That took another two minutes. My log book

gave me the wavelength of the *Lilybelle's* receiver.

"Calling *Lilybelle*!" I barked so loud into the transmitter the kick-back nearly knocked me off my seat. I toned it down a bit.

"Calling *Lilybelle*! *Skyhopper* calling *Lilybelle*. Come in please!"

I kept it up for a half-hour then quit in disgust. Not only was the guy a rotten driver, he didn't even obey regulations and keep his receiver open and set on the automatic register!

I snapped on my own "squawker" and after making sure I was heading right, stretched out for a few winks. The automatic would wake me if a call came through.

CHAPTER II

Twice Is Too Much!

SPACE travel is about the most boring in the universe. It has all kinds of funny angles. You don't feel so alone when you first leave the home planet—because you can see that big ball hanging beside you right close by; and that's funny too, because you figure it ought to be down *below* you somewhere on account of you went *up* when you left it. But after you get well away, things suddenly shoot far back in space and you realize that you are plenty isolated from everything real. Outside there's nothing but star-shot empty blackness, and even though every star and planet shines like a jewel of flame, the beauty of it has nothing in common with the feeling in the pit of your stomach. Why does loneliness hit you in the belly that way?

Anyway, two days later, I was feeling so rotten that even the voice of the guy in the *Lilybelle* would have been welcome. Which served to burn me even more, because I'd been trying for two

days to raise him without even the whisper of an answer. Now, even if the guy was a complete jerk, I was beginning to wonder about that long silence. First thing he knew, he'd have a patrol ship on his neck asking why he was traveling doggo. That's against the regulations governing interplanetary travel. The regulations say you gotta keep your automatic receiver recorder open!

There was one reason for silence, though, that was beginning to worry me somewhat. Maybe something had happened to the guy. Maybe he was sick, had keeled over, and was skyhooting along out of control . . .

The jangle of the obstacle alarm shredded my nerves and made me jump clean off of my seat. Jeepers, this wasn't the regular meteorite danger area! And the way the alarm went nuts, my trajectory was sure laid right smack on something big enough to make hash out of my ship!

Then I saw it. Straight ahead of me, not more'n a mile, was a ship cutting square across my path, rockets *pht-phting* the way they do when course is being corrected!

Right then and there I invented eleven new cuss words which I didn't have time to admire and catalogue in my future-reference file. I jabbed at control buttons every which way, and wound up dizzier than a ballet dancer full of Martian redeye. But I saved my life, plus that of the goon ahead of me—because I missed him by a hair—no, that's an exaggeration—it wasn't that generous a margin!

When I had tucked my curly locks back onto my head, I tried to find out which direction I was going, and was that a job! It seemed I was going at least five different ways at once, and none of 'em the way I *wanted* to go. I was spinning on two orbits, and doing

a lazy-daisy roll at the same time. I couldn't see any stars, because they were going so fast they were *streaks*. My hair went right back up again when it hit me how much fuel I'd have to use getting back on course!

My automatic recorder began squawking at the recording tape, and I switched on the speaker. The voice that came out was the usual tinny, sexless, robot-like voice that all space-receivers spit at you. You couldn't recognize your own mother if she called you in space. But identifying this guy was easy . . .

"What in hell are you trying to do, *Skyhopper*! Murder me? This is the second time you've squirted that crate of yours into my path! Take it from me, mister, your number's going to the first patrol I pick up!"

It was the *Lilybelle* that had cut into my path!

Now you can believe it or not, but for once in my life I didn't use any cuss words. How could I? There wasn't one on record that was fitting to the occasion! Instead I took hold of the transmitter with an icy calmness that bruised the flesh of my fingers, and spoke very deliberately into the mouthpiece in a voice that mashed the magnets flat. My words were very decorous too, but because I'm a gentleman, I won't repeat them.

"Stop yelling, you fool," said the receiver. "You're freezing the mike and nothing's coming through but a roar."

"You jackass," I bawled, "you should be over *here*! Then you *would* hear something! Why you . . ."

"Watch your language!" came from the receiver. "You're talking to a . . ."

"*Gentleman*?" I screamed. "Like billy-blue-hell I am! And this is a promise—when I get you on terra-firma I'm gonna knock your stupid block off! I'm gonna punch your face right into

the back of your neck. I'm gonna peel off your ears and stuff 'em in your mouth. I'm gonna . . ."

"Bite off a lot more than you can chew!" came the angry voice from the receiver. "Listen, you foul-mouthed nincompoop, I'd be more than willing to meet you any time, any place . . . after the pressure of business is off. Right now, go peddle your fish . . . and correct your course, you're a bit off!"

There was a sharp click and the voice went off the ether.

Screaming insanely, I tore off the base of the mike in my hand and hurled it at the wall. It went right through a panel, crushed a can of tomato juice in my larder, which spread promptly over practically every inch of the walls because my ship was still spinning like a dervish.

That made it perfect. I sank back with a sigh of contentment and proceeded to snatch myself bald . . .

CHAPTER III

Monkeys and Bock Beer

YOU know how it is when you listen to what your reason tells you could more than likely be the ravings of a person out of his mind—and you see a phantom fortune looming up somewhere among the ravings. You set your mind to be ready to discover they *are* ravings, and that there's absolutely nothing in them, and that no treasure exists, and that you aren't going to be disappointed; so's you can say to yourself: hell, I never expected anything anyway!

So you know how I felt when I laid my telescope sights squarely on a little speck ahead of me and realized there was an asteroid at my destination! One thing the old guy had said was true—and it followed the rest was! Or should I hope for that? You see, if *those* other

things came true, then maybe my hopes would suffer a relapse. After all, monkeys, bock beer, Harvard gentlemen who never hit a lady . . . all that just doesn't make sense.

Well, it took me several hours to finally set my ship down on that little world which wasn't marked on the spacemaps. And I found it was the most unusual chunk of rock and metal I'd ever landed on—because it had an atmosphere. *Now* I was ready to believe in the monkeys! Don't ask me how come such a tiny world as this—it was only about thirty miles in diameter—could have an atmosphere. The only thing I can figure out is that this chunk of planet, or whatever it is, has a great deal of oxygen and hydrogen and other gases held imprisoned in its rocks, and maybe a constant chemical reaction is going on which releases them from combination. Naturally the atmosphere slowly escapes into space, but enough remains within a mile or so of the surface to create a layer which is life-giving enough to be perfectly breathable. Also, I found out when I stepped from my ship that the gravity was almost as great as that on Earth's moon. This little world was plenty dense.

All over the landscape there were funny little trees, hardy, something like scrub pine, but shaped like an umbrella. Bushes grew here and there too, and on the horizon which wasn't more than two or three miles away tiny clouds drifted along. There was a whitish light that almost seemed like daylight, even though the sun it came from was so far away it looked like a co-sa-cola bottle cap. I guess it was because the soil was almost white, and looked a great deal like snow. The reflection from sunlight and starlight, both of which were visible at the same time because the atmosphere wasn't thick enough to make any difference between

night and day, was about enough to give the effect of a cloudy day on Earth.

As far as I could see, there wasn't a mountain or even a hill on the whole planet. And that's how come it was easy to find the building; it stuck up out of the plain like a sore thumb . . .

YES, it was a building. As old as all get out, and just too outside to have logically been constructed on this little chunk of rock as it is—somehow I knew it had been built when the asteroid was part and parcel of a large planet, maybe as big, or bigger than Earth.

Before I stepped out of my ship, I loaded my automatic rifle and put on a full belt of cartridge clips. Monkeys, the old man had said. But if they were monkeys, they sure handled the old man rough! Rough enough to fix his clock for good! I wasn't going to take any chances.

According to the thermometer it was around 85° in the shade, which meant everywhere so I wore my tropics. Which was pretty much as I liked it. You can move around pretty fast dressed in shorts and shirt. And maybe I'd have to move fast. Maybe it *wasn't* monkeys that messed the old man up!

It got pretty hot tramping across that flat plain toward the big building, and by the time I got to within a hundred yards of it I was sweating. I stopped to look the joint over. It was a tremendous pile of a building, built out of square blocks of something that looked like black, unpolished marble. It was a rough stone, and dull to look at. In the half light of this little world, it looked almost inky black, and certainly the most depressing mausoleum it has ever been my unappreciated privilege to see. Beyond its awe-inspiring size, it was a most unimaginative piece of architecture. Just an oblong mass, built of gigantic blocks.

On the side facing me, about near the center, was what looked like a heap of rubble that had fallen at the foot of the wall; but as I got nearer, I saw that it was a rough semi-circular stairway of a sort, built of odd stones and just plain earth. At the top was a square block of the black stuff, perched queerly like an altar. Behind it was a square of white and red with black figures on it, apparently set into the wall.

When I got near enough to see what it was, I said: "Well I'll be horse-whipped!" And I meant it. Looking down at me was a goat's head, in the center of a poster, and in big black letters was the legend: **SPRING IS HERE—DRINK BOCK BEER.** In smaller letters was *Blatz Brewing Company, Milwaukee, Wisconsin.*

One hundred and ninety million miles from Earth, on an uncharted asteroid, I find a bock beer sign right out of America's Krautland! You could have heard my yell clean around that pixilated little world!

I ran up the rude steps, climbed the big block of stone, and stood looking at the sign. On the lower half of it something was written in pencil. I craned my neck to . . .

"Touch that sign and you're a dead man!"

DID I say this was a pixilated world?

That voice, coming from behind me, was as shocking as anything you could imagine inside a nut house; because it was a woman's voice. It was high, and clear, and *deadly*. Even before I turned to look at her, I knew she meant what she said.

Her face was dirty. Her nose was shiny with sweat. Her hair looked as though she'd tied it up in store string and then knotted the whole mess on the back of her head so that it would be out of the way—and I guess that was

exactly what she had done it for. She was dressed in tropics, and except for bony knees she had a pretty pair of pins. The rest of her was bulgy with equipment and other things. When I had looked long enough I saw the other things weren't bad to look at—anyway, they put enough curves here and there to make up for the lumpy places where less soft things such as cartridge clips were hung onto her.

"I've come for my father," she said, pointing a repeating rifle full of hard things at me. "Your game is up!"

"Your father?" I asked blankly. "What game?"

"You're here, aren't you?" she asked with an odd deductive softness in her voice that I didn't get at all; what was she deducing?

I opened my mouth and gawked. Then when I began to feel as though I presented a rather ridiculous appearance, I remembered that when your mouth is open, you ought to be using it. So I said, "Sure I'm here." I know now how people say things stupidly; I said that stupidly!

She almost snarled. "Then don't hand me that innocent act! You know as well as I how you got here! And that proves . . ."

I gulped. "How *did* I get here?" I ventured cautiously. "And what does it prove?"

She dug furiously into her blouse pocket and produced a scrap of paper which she waved triumphantly. "With the other half of this!" she accused. "Don't try to deny it. You thieving, kidnaping rat . . ."

Nuts. Absolutely, completely, insanely nuts! I had come here on a piece of paper!

My life wasn't worth a plugged nickel. With a mind like that, it was a cinch the slugs would begin flying in a few seconds. I could see it in her eyes.

There was only one chance for me—I had to disarm her.

I stood facing her, not saying anything, trying to figure out how to save my skin, while she raved on. If my position hadn't been so desperate, I could have found sympathy for the poor girl. No telling how long she'd been marooned on this crazy world. Considering what I'd already seen here, it was no wonder she was as mad as a March Hare. Madness is bad enough in itself, but when it carries an automatic rifle with a full clip . . . *oh, oh!*

While I was standing there, scared silly, the monkeys came.

It sounded like weird, snake-charmer music at first. It came over the flat plain from around the other side of the building against which my back was plastered like a condemned man's. Around the corner of the building a leaping procession of pop-eyed, top-knotted monkeys paraded, squealing and chanting in a queer rhythm. They came straight toward us, seeming in no hurry, but very definitely bound for the crude stairs leading to where I stood. All at once I got the sinking realization of what this stone block was I was standing on . . . those monkeys were parading along just as a religious procession does on Earth, and I was standing on their altar!

EVEN before the monkeys came, it had been a *sacrificial altar* to all intents and purposes, because of the insane girl, so the awful pictures that sprang into my mind were almost an anti-climax. But I saw the light. The girl! *She* must be their priestess! *She* must be their executioner! I turned fast, in horror, toward her—and that's where my opportunity came. I turned so fast she must have been caught off guard. She was staring at the monkeys surprised-like as if maybe they had

come too soon, before she'd finished her spiel. Anyway, she wasn't looking at me, and the rifle had wavered. So I clipped her.

It was as neat a sock on the jaw as I've ever put on anybody's button, and she went down for the count. I did the next thing in the book of rules—I grabbed up her gun and my own and I ran! Ran as though the devil were after me! And don't tell me he wasn't!

Fifty feet behind me raced a horde of chattering, howling monkeys—and the substance of their howling was the final, screwy touch to the whole mad-house and the final screwy factor that brought my belief in a "treasure" to crystallization in my mind. Behind me came the roaring chant:

"Never, never hit a lady!"

CHAPTER IV

The Lilybelle Again

I HAD to turn and fight when I reached a clump of trees. I dumped the gun I'd taken from the girl to the ground and fired a burst from my own gun over the bobbing heads of the leaping little devils, but it didn't stop them at all. They came on, chattering their ludicrous war cry "*Never, never hit a lady—hit a lady—hit a lady—lady!*" There was a ridiculous sing-song effect to the cry that would ordinarily have made me roll on the ground with laughter; but it was all too obvious that they meant vengeance on me for hitting a "lady" if their high priestess could be called that! So I had to shoot to kill.

I knocked down the leader with a pretty shot, then picked off two more directly behind him. They went down like ten-pins, and a couple dozen others piled up in a heap of thrashing legs, heads, and whipping tails as they stumbled over the dead ones.

Immediately there was a milling, chattering confusion and all at once the chant stopped. They took up a new singing noise, similar to that they had used when I'd first seen them come around the corner of the building. Then, as I watched, blinking, they lifted their dead comrades on their shoulders and trooped back in a solemn yet strangely anticipatory manner toward the altar.

Back there I could see a bunch of the little devils carting the unconscious girl away around the corner of the building. Obviously they were taking their queen to a safer place.

As for myself, I was completely forgotten, and I stood there quite a while watching curiously. Then I saw the reason for the return to the altar with the corpses of their comrades—the monkeys were cannibalistic!

My stomach turned a little, and I grimaced. My eyes caught the bock beer sign above the altar, and I wondered about the pencil marks I had seen on it. That was one thing I was burningly anxious to read. But it was a cinch I couldn't do it with the monkeys feasting on that now-messy altar.

I decided to do a little snooping around and began to pick my way, both rifles slung over my shoulder, along the edge of clump of trees that led around the black building. I had gone a little more than a quarter of the way around when I stopped dead in my tracks.

"A space ship!" I burst out.

And as I walked forward, cautiously keeping to shelter, I thought I saw something familiar about the lines of her. But it wasn't until I was almost up to her that the truth burst on me. Across the bow of the little ship was a single name, *Lilybelle!*

"Oh my maiden aunt!" I said with a sick feeling at the pit of my stomach.

"Oh my golly!"

THOSE expressions will give you some idea of how this discovery hit me. Ordinarily I can find plenty of swear words to fit almost any situation. Maiden aunts and gollies I reserve for the situation.

My mad girl friend hadn't been the high priestess of the monkeys at all! She had been the pilot of this ship—the selfsame person I'd vowed to sock on the kisser the first time I faced her on terra firma, or asteroid firma, whatever you prefer! And I *had* socked her—because I'd believed she was nuts.

The next minute I was pelting back toward the building and the altar as fast as I could go. No matter how bad a pilot the gal in the *Lilybelle* was, I didn't want to see her driving career ended in a heap of bloody bones on a cannibal monkey tribe's altar; or where else they elected to eat her! Deep inside me I had an ugly feeling that the monkeys were distinctly not gentlemen, no matter *what* their warcry was.

But when I got back to the altar, there wasn't a monkey in sight.

I WENT on up the steps of the altar and in a few seconds I was peering at the weather-beaten sign and deciphering the penciled writing on it.

"This claim is staked out by Pete Kemperer, and if I croak before I register it, it is staked out in the name of my daughter, Lilybelle Kemperer."

I read the simple, direct words in a voice that wasn't exactly complacent. I saw now the implications it put into all that had happened.

The old guy I had rescued, and who had given me the location of a "great treasure" along with a lot of insane things that hadn't been insane at all, was beyond all doubt this very same Pete Kemperer. I'd thought he'd called himself Pete, the *Camper*. And the girl in the *Lilybelle*, who had twice burned me

up beyond all reason, and whom I had knocked unconscious and inadvertently delivered into the paws of a hunch of cannibal monkeys, was his daughter, Lilybelle.

All of a sudden all she'd said made sense. That paper she'd waved around. . . . I saw it lying on the ground and snatched it up. It was half of a space chart with a course plotted on it. And the course, if continued, would have led directly to the spot in space occupied by this selfsame monkey asteroid!

Now I knew why she had accused me of having come here the same way she had—she had believed I had the other half of that map! And I also understood why she had accused me of kidnapping her father. Whoever had the other half of that map, would also be *after* the treasure, that was a gold-plated lead pipe cinch.

And I knew one thing she didn't. I knew that that somebody had murdered her old man to *get* the treasure!

My face was white as chalk as I stuffed the half map in my blouse pocket, picked up my guns and raced down the rude steps toward the corner of the building around which those devilish monkeys had carried Lilybelle Kemperer. If the thief-kidnaper-murderer was around, I'd have to take my chances on blundering into him. Right now there was one thing that had to be done; I had to get the girl out of the paws of those filthy monkeys, before . . .

I ran as fast as I could go!

Monkeys have tails, don't they? They live in trees, don't they? Well, I'm willing to bet you a year's pay I looked in every tree on this damned little world, and I didn't see a single, unblessed monkey! It was as if the whole race had vanished from the face of the little world.

Maybe now you're suggesting, what

about caves? Okay, caves. But there ain't any caves! Not a hole big enough to hide a gopher anywhere. I know, because I used up every bit of fuel I dared, to criss-cross the little world from pole to pole. Nothing! And right there, I was finished. Use more fuel, and I don't get home.

I SET my ship down right beside the *Lilybelle* and thought it out. By this time it was getting dark, and I had to make up my mind. As I sat there, I reasoned it this way: the monkeys had eaten their dead comrades at the altar. And they'd done it in a ceremonial way. Maybe that was the way they always did it. It *had* to be the way they always did it. If it was, then the answer was simple . . . they would come back there with *Lilybelle* to eat her, from wherever they were.

Wherever they were! Okay, I'm simple! The building! Where *else* would they be? So you think I didn't think of that. . . . Well, there isn't any way to get into that ugly stone pile! Not a door on any of its perfectly blank sides. Unless it's a secret door—and did you ever try to find the one stone in maybe millions which is a door?

Yes, it was the altar—that's where I'd have to park myself and wait. Sooner or later the monkeys would come back, and I'd be there. Waiting. With every slug I could find in both ships stacked beside me. And if I was too late to save her life, there'd be damned few monkeys who would live to go back to that nowhere into which they had so mysteriously vanished!

It was when I stepped into the airlock of the *Lilybelle* that I got a jolt that was like to knock me dead. I froze silent in my tracks, listening to the voice that was coming to my ears. It said: "Oh my maiden aunt . . . oh my golly! Oh my maiden aunt . . . oh my

golly . . . oh my maiden—" and so on, over and over again.

The voice was a perfect imitation of my own, and the words were the words I had used when I'd first found the *Lilybelle*. . . .

Holding my rifle ready in my hands I tiptoed into the ship toward the voice. I came to the pilot compartment and stopped in the doorway, stunned. There in front of a mirror set in the wall was a monkey, and he was parading up and down before it declaiming with great gusto in a perfect imitation of my voice, "Oh my maiden aunt!"

"Oh my golly!" I said.

The monkey stopped parading, turned and looked at me. He raised one paw and fiddled rather absently with his top-knot, then grimaced. "Come back here with that damned map!" he howled.

You could have bowled me over with a bull fiddle! If that wasn't the voice of old Pete Kemperer, I'm a four-star idiot. And while I stood there, thunder-struck, the monkey cautiously tried to make his way past me through the door, exactly as a child might do when caught in the pantry stealing jam. And like a mother who has caught the child stealing jam, I moved over and blocked the way.

The monkey stopped, hesitated, backed up again. He stood against the wall, eyeing me fearfully. I just stood there, waiting. Would he say anything else? He did! And in four different voices!

"A million tons of the stuff!" he gloated. "Think of it! Won't the void be buzzing with spaceships when this stuff begins to hit the market!" The monkey's voice changed again, and this time the imitation was well-modulated, cultured and unmistakably Harvard! The accent was so thick you could cut it with a knife; no Harvard man ever

talked more Harvard!

"Tellurium isotope x," he said didactically, "beyond all doubt. Do you comprehend the import of our discovery, Mr. Rodzinski? These blocks are undoubtedly united lead and tellurium, in about equal proportions, unheard of anywhere in the solar system, to my knowledge. Financially speaking, there are billions of dollars worth of ore here, already mined, and apparently, almost perfectly refined. Oh my golly!"

THE sudden switch to my own voice on the last three words made me jump. My jump made the monkey jump, and he became even more alarmed than before. In direct proportion to his alarm, he chattered on at increased speed, his voice flipping from one simulated human voice to another with bewildering rapidity.

"Parrots in monkey form!" he marveled. "Come back here with that damned map, oh my maiden aunt! . . . hexagonal-rhombobedral in form . . . take that, you damned monkey! . . . ouch, got me right in the guts . . . that's what makes the blocks appear black . . ."

On and on the monkey chanted, in four different voices, jumbled together with no rhyme or reason. When he stopped, breathless, and stood watching me with beady, fear-filled eyes, I swear I had heard a multiple recount of everything memorized in that amazing parrot mind of his, and I had gotten a pretty fair picture of what had happened. I'll try to add it up in sensible continuity:

Very obviously three persons had made a very rich discovery here on this amazing little world; one of them being a geologist who had been educated at Harvard; another his companion, a less educated gentleman named Rodzinski; and old Pete Kemperer, who had obvi-

ously arrived some time before the first two—only to have Harvard and Rodzinski step in and hi-jack his claim. Later the two hi-jackers had been killed by the monkeys and eaten on that blasted black altar of theirs!

Pete Kemperer had staked his claim to the tellurium-x by the simple expedient of preparing a map as required by the registrar's office of Earth. The bock beer sign had been his notice of claim. For his stake lines he had taken the four corners of the building. Which very neatly took in every ounce of the tellurium deposit, because the building itself was the deposit! Each one of those blocks of stone in the building was half tellurium!

What had happened to Harvard and Rodzinski was vividly and horribly clear in the dialogue the monkey repeated, down to the last despairing scream of agony from the lips of Rodzinski as hordes of monkeys tore him down to death.

There was no doubt that it was this mad jumble of things that Kemperer had mumbled in his death delirium when I had picked him up after his escape from the tiny world.

Yes, I can see the flaw as well as you can. How did Lilybelle get half of that map? The half that the monkey—this monkey or another—hadn't gotten away from old Kemperer? I can't explain it—but maybe Lilybelle can. If I find her alive!

That was what was in my mind now as I faced the monkey, who still popped up with occasional inane remarks such as "By God, those monkeys can telepath, too, Rodzinski!" which didn't make any sense at all, because it didn't seem to fit into the story. What if the monkeys could telepath? The crazy remark, coming right now, brought a thought to my mind, and it seemed worth a try.

"Listen, my monkey friend," I said. "If you can telepath, let's have the location of your hideout. Where'd your buddies go with the girl?"

"That damned map!" he howled in response. "Come back here with that damned map! Ob my maiden rhombodral!"

I KEPT up my questioning, hoping to reach his mind. Naturally I didn't expect an answer, because all he could do was repeat anything he'd heard.

"How about it, bub? Why don't you light out in the direction of your hideout, and I'll follow you?" I stood aside, and he peered out of the door anxiously.

But he made no move to slide past me and escape. "Listen, my monkey friend," he said seriously. "There are billions of dollars worth of ore here."

"You're telling me!" I exclaimed, beginning to get a bit sore about the whole thing. Whether he knew it or not, he was hitting a soft spot. I had come here to make this strike, and now that I had it, it was beginning to look like it would be too hot to handle.

I began to back out the door, thinking maybe he'd make a dash for it when the way looked clear. But he stood still, seemingly waiting for something, and no longer wanting to get away. It was when I had completely backed out of the door that I understood what he was waiting for. Four million monkeys piled on me all at once!

Maybe it wasn't that many, but it was enough to smother me without a chance to fire a shot. I went down certain of at least one thing: those monkeys *could* telepath, and my little friend had been setting a telepathed trap for me even while he kept me busy listening to his chatter! He had made a monkey out of me!

In a few seconds there were a hundred monkey paws gripping me. Mon-

keys held my rifle, a half-dozen of them holding on to it for grim life. They all hopped up and down excitedly. And they screamed at the top of their lungs, now that they had ambushed me so neatly.

"*Never hit a lady!*" they chanted.

And damned if I ever will! Again! That is, if I ever get out of this mess alive!

I headed the procession of singing monkeys in fine style, held aloft by as many as could get a paw on some portion of my anatomy. They went straight back to the building, around past the altar, and around the corner from which I had originally seen them come. They marched straight toward the blank wall, and a whole section of it slid back noiselessly and revealed a dark-as-the-ace-of-spades interior.

We went in, still marching to the cadenced screaming of their insane song. The echoes inside were enough to drive me nuts—and enough, too, to tell me I was in a tremendously big room.

We went down a great flight of stone steps and as we proceeded, it got lighter. A greenish glow seemed to come from the walls, and by its light I found out I was in a great underground cave. I was certain this cave was not under the building itself, but off to one side. The great weight of the building would have crushed it down into a subterranean opening as vast as this.

It seemed the building was unused, serving only as an exit from the underground world of these monkey people. Obviously the connection between the two was nil; a matter of two vastly different civilizations—of which the monkeys were the surviving race.

Finally we arrived at a sloping well, the stone sides of which were smooth as glass. Without a pause they dumped me onto the slope and I slid down like lightning to land with a thump at the

bottom. There was an immediate clatter and both my rifles slid down beside me. Then followed a lot of miscellaneous junk they'd collected from the ship, including my sun helmet.

I scrambled to my feet, snatched up my gun and leveled it.

"Now—you filthy, little beasts," I yelled, "take some of my medicine!"

"TAKE it easy, pal," came a slow-drawling voice behind me. "It won't do any good to plug as many as you can see. The only way you'll get out of this nice little jail is to have them haul you up—and how could they do that if they were all dead?"

I turned around like I'd been shot, and gaped at the man sitting calmly on the floor, his arms clasped around his knees, rocking himself back and forth lazily.

"What the hell!" I said in surprise. "Who are you?"

"Name's Gurvey. Or if you don't think that's enough, call me anything you like—just so it's your business and not mine."

I looked at him, then back up at the monkeys.

"Yeah," he said, in explanation. "They got me the same way they got you, I imagine. And they dumped me down here. I've been here for about two days, near as I can guess. And I'm glad you brought two guns with you—because I aim to use one when they cart us up out of here to that damned altar of theirs."

"Well, I can't beef about that," I said. "Personally, I'm damned glad to be able to provide you with a gun. When the firing begins, it's going to be hot and heavy, I assure you."

"You sound like you got more than just a grudge against these brutes," he said cautiously.

"They've got a girl," I said savagely.

"And I'll exterminate every last one of them if . . ."

"A girl?" Gurvey got to his feet. "Who?"

"Name's Lilybelle Kemperer," I said, "if that could mean anything to you."

"It couldn't," he said. "Don't know the dame."

"Yeah," I said. "It is a big solar system, isn't it? And since we're lining up handles, mine is Bill Wallace. I'm a prospector."

He lifted his eyebrows. "You ain't prospecting on this dung-heap?" he asked with an inflection that was obviously ironical.

"Don't have to," I said bluntly. "What's here can be seen at a glance."

"You've glanced?" he asked.

"Sure have. And damned if I need another look. What's your racket?"

"Claim jumping," he said calmly.

"You sure picked a hell of a place for it!" I was a bit winded by his answer. Was he kidding?

"I didn't pick it," he said. "I got off course, and had to land when my fuel gave out. In other words, pal, I'm marooned here, and if you ain't got a ship, I'm gonna die here!"

"Where's your ship?" I asked. Maybe I put too much emphasis on the question. I was too sure there wasn't another ship on this little world. Hadn't I just covered every inch of it?

"Somewhere in that black hole of a museum upstairs," he said. "Those interfering monkeys rigged a slave-gang and dragged it inside."

"Oh," I said. Then: "Do you know the name of this godforsaken hunk of rock?"

"It hasn't a name. It isn't even here. The system maps say nothing is here; from which I gather nobody ever looked. Offhand, I'd say this was a place called Uncharted. Got anything to eat?"

I grinned at him. "Sure thing. I've got a pack full of food pellets. No water, though."

"I can still spit," he said with an answering grin. "So maybe I can get it wet enough to swallow. And if I'm not wrong, we'll be hoisted out of here in a few hours to serve as the *piece de resistance* on that altar outside."

"That's what those dumb monkeys think," I said, opening my food pack. "Only they shouldn't have tossed my guns down here with me!"

"I can hardly wait!" he agreed, and there was a gleam in his eye that scarcely became brighter when I handed him a fistful of pellets.

IT COULDN'T have been more than a few hours later when they came for us. It started with that sing-song chant of theirs—the one they'd used when they'd eaten their dead comrades; the monkeys I'd shot. In a moment there were neatly a hundred of them grouped around the pit.

"Here it comes," said Gurvey calmly. He picked up his rifle and I did the same. I held onto it tightly. I didn't intend to let any monkey snatch it away from me—and I said so.

"Hang onto your gun until you get out of the pit—then begin the fireworks immediately, before they have a chance to pile all over you. They caught me that way. They seem to have a special penchant for wanting to carry things, even if they have to share them."

"Right, buddy," Gurvey thanked me. "They'll find this gun as tight a part of me as my arm. And you don't have to tell me when to start shooting—I've always contended that the guy who opened fire first was the guy who ate the least lead."

Nothing had happened as yet, except that the chanting grew louder. "How are they going to lift us out of here?"

I wondered. "I don't see any ropes."

"Maybe they'll make a monkey chain, tail-to-tail," Gurvey cracked.

I didn't have time to say any more, because just then my question was answered. The cone-shaped pit we were in began to tilt slowly, and I realized the whole thing was on a great pivot, operated by some mechanism, probably a counterbalance, just like the stone entrance to the temple above must have been. We lifted slowly, until the side of the cone became horizontal. Then the motion stopped. We were free to walk out of our prison.

Free, that is, to walk into the waiting circle of caterwauling monkeys; but not free of the underground caves. "Take it easy," I said. "Let's get out of this damned hole before we blast. I don't think I know the combination to the front door, or even how to get out of here. It's dark as the inside of a pitch-barrel up above."

"You're telling me!" Gurvey grunted. "But if they make a move to mob us, we gotta blast."

"Right. But maybe we can do something to distract their attention."

"What, for instance?" asked Gurvey sarcastically.

"Well, they're singing," I suggested. "How about putting out with a few tunes ourselves? They seem to put a lot of stock in music."

"It won't be music, if we put it out," said Gurvey with a grin. "But it sounds like a good idea. How about *Tramp, Tramp, Tramp, The Boys Are Marching* complete with tramps?"

He suited the action to the words and began marching slowly forward, tramping on the stone floor as though he was a soldier-playing kid, slapping the leather down until I thought he'd develop fallen arches before he'd gone twenty feet! I immediately followed suit, and the slap-slap of our feet echoed

even over the chant of the monkeys, which lessened in volume a moment, faltered as we marched forth. Then our song ripped out and the echoes really rang through that caveland!

"It's got 'em!" Gurvey exulted between phrases.

It had! The monkeys stared at us in wonder, and then began to lift the volume of their own chant until it became a contest such as I'd never even have imagined. And all the time we marched—straight up that great flight of stone steps and into the darkness above.

When we got to the place where I judged the exit must be, the din was terrific. The monkeys, if not ourselves, were enjoying the singfest immensely!

Weak as it was, the light outside almost blinded us when the great block of stone that was the door swung open. The way to the outer world was open.

"Blast 'em!" snarled Gurvey. "Sweep the whole area right from here, then run through 'em. They're bunched like a covey of sitting ducks!"

THE chattering roar of his rifle blasted out and echoed through the temple with a din that was so terrific it was ear-stunning. He wasn't bothering to take his finger off the trigger—he was just letting his gun belch. I held my own gun at waist level, aiming low. Then I let fly too. Monkeys went down as though mowed with a scythe.

"Run!" screamed Gurvey. "Right down the center!"

We ran. Straight through the dazed monkey ranks; and around the corner of the building. There I stopped as though I had been shot. Ahead of us, grouped around the altar, was another group of chanting monkeys. And standing up on the altar itself was Lilybelle, looking very pale and not a little bit scared.

"Hold it, Gurvey!" I croaked.

"There's Lilybelle!" He had been pelting along desperately in the direction of a clump of trees out on the plain. He stopped, swung around, looked at the altar. Then he shoved a new clip of slugs into his gun and walked toward the altar, right beside me. Behind us came the remaining monkeys, howling like mad, but walking too. They had learned to respect us—but I could see it was a case of grim stalking now. They didn't intend to let us leave, alive, if they could help it!

"This is it, Gurvey," I panted. "Let's harge through, get her, then blast our way to the ships."

"No!" he said roughly. "They're scared a bit. These fellows have got the whole story by telepathy. See how they're opening to let us through?"

I looked behind us. "Yeah, and I can also see they don't intend to open to let us out!"

"Okay," he said. "When we leave, we blast."

We walked forward and the monkey ranks parted to let us through. Then they closed in tightly and crowded close. We walked up the altar and I grabbed Lilybelle by the arm.

"You all right, kid?" I asked anxiously.

"Yes," she said faintly. "I'm all right. But not for long, from the look of things. Do you know what these awful animals do on this altar . . .?"

"Yes," I said hastily. "But let's skip that . . ."

I didn't finish, because suddenly Gurvey snatched my rifle from my hand, and before I had time to think of what was going on his own gun was blasting a path through the monkeys and he was charging away, carrying my gun in his free hand! The ease with which he had done it left me feeling utterly foolish—the kind of a feeling I'd remember with mortification all my life.

"I told you I was a claim-jumper!" I heard his triumphant yell float back to me as he blasted his way through the monkey ranks. "Don't give the monkeys indigestion, pal!"

Red rage filled me, and I leaped forward in his wake, but brought up short with the red all evaporated. The monkeys knew my gun was gone—and they closed ranks like a steel trap, barring my way. That's all; no other moves. They had me—us—and they knew it. I backed up onto the altar again, and put an arm around Lilybelle.

On the altar beside me I saw a scrap of paper. It must have dropped from Gurvey's pocket when he made his rotten play. I snatched it up. Lilybelle snatched it from me in turn with a gasp.

"Why," she said, "this is the other half of my map!"

SUDDENLY it all came to me. Gurvey was the guy who had beat old man Kemperer to the point of death and left him helpless where I'd found him. The rat had told the truth and I hadn't taken him seriously! He was a claim jumper. He'd come to this little planet looking for Kemperer's treasure and had miscalculated, so that he'd run out of gas. Now he was on his way to escape in my ship and I was helpless to stop him!

"He had the half of the map I thought you had," said Lilybelle in a voice that trembled.

"How'd you get your half?" I mumbled, only partly aware of what I was asking, so numbed was my mind by my discovery and by the situation we were now in.

"Dad sent it to me spacemail," she said. "Told me he'd follow, but that he'd sent half the map to me to safeguard his discovery in case anything happened to him. Then he never came . . ."

Gurvey was out of sight by this time, and strangely, not a monkey had followed him. Instead they began to circle around before us, and went into the now-too-familiar chant. "Guess they think we're meal enough," I said, and regretted it instantly the fool words had left my lips.

But Lilybelle could take it. She was white-faced, but she stood stiffly and bravely beside me. I looked at her an instant, and my eyes roved over her features as though I was seeing her for the first time. And right now she looked like the most beautiful woman in the solar system to me—especially in contrast to that ridiculous picture of a goat's head right behind her!

"Lilybelle!" I gasped.

"What?" she gasped back.

"The goat!" I mumbled hysterically. "It's these critters' god!" I pointed at the buck beer poster with a finger that trembled.

She stared uncomprehendingly.

I gripped her arm, swung her around to face the ceremonially gyrating monkeys. "Sing!" I commanded. "Sing, stamp your feet—and loud! Distract their attention from me!"

She started immediately, singing in a voice that I would have admitted at any other time was just about the worst I'd ever heard from any female; but right now it sounded like the singing of an angel. And as she sang she leaped and stamped and swung her arms until she gave what must have been a sweet imitation of a whirling dervish. She attracted the monkeys' attention, and bow!

I got out my pen-knife, and faced the wall. As quickly as I could I cut out the goat's head, punctured the eyes and slapped the thing across my face. I held it with both hands beside my face and turned.

"Stop, Lilybelle!" I screamed, to

make her bear over the tumult she was making. "Stop singing!"

She stopped so suddenly the silence was almost deafening. It was only then that I realized her act had completely damped out the chant of the monkeys and that they had stopped their own noise out of sheer futility. They were looking up at her in wonder. That was my cue. "Step aside, Lilybelle," I whispered.

She did, and I stepped forward and thrust my goat mask out pugnaciously and did the only thing I could think of to enhance the illusion I was trying to create.

"Baa-a-a-aa!" I bleated.

YOU never saw such a bunch of startled monkeys in your life. They were positively frozen in their tracks.

"Come on, Lilybelle!" I whispered. "Either we walk out of here now, or we never do!"

I marched down the rude steps, uttering my pathetic bleat at every step. Lilybelle followed right behind, and the monkeys scattered like leaves before a storm. Scared? Those monkeys were so scared they almost turned lemon-yellow! And I could hardly blame them. It would be bad enough to see their god come to life, but to see *me* come to life as that god . . . well that was it!

I went straight toward the ships. Gurvey hadn't known where they were, naturally, and I hoped desperately that he hadn't found them yet. We reached a clump of bushes, after rounding the corner of the building, and I peered through. The ships were there! But as I saw them my face fell, behind the mask. Both ships were surrounded by a horde of monkeys!

I heard Lilybelle moan in despair behind me.

I felt pretty low myself, but I decided to carry the bluff all the way. "Come

on, Lilybelle. We might as well march this goat mask right into the middle of them—"

But I didn't step out of the bushes—because just then I saw Gurvey. No, he wasn't coming up to the ship—he was coming *out* of it. And coming out exactly like I'd come out of it once myself! He was being *carried* by as many monkeys as could get a paw on his anatomy. And each of the rifles was being carried by other monkeys. Gurvey'd forgotten my warning—he'd been piled on as he came into the ship, and I had no doubt as to how it had been worked. No wonder the monkeys at the altar hadn't followed—they'd sent a telepathic message to their mates guarding the ships! They'd had every possibility covered!

We watched them parade back past us to the altar, where their demoralized buddies were still milling around in a blue funk. Then, when they were out of sight, Lilybelle and I made a dash for the ship. We got inside and slammed the port shut. Then, before I did another thing, I grabbed Lilybelle and kissed her right on the mouth.

You do things like that when you find out you're in love with a girl!

Before she had any time to recover, I yanked her into the control room and shoved her into a recoil-seat. Then I sat in the pilot seat and blasted off.

We zoomed up over the big black building and hovered on rocket jets while I looked carefully down.

"What are you going to do?" asked Lilybelle.

"I'm going to ask you to shut your eyes," I said, "and keep them shut until I tell you to open them."

She got a little white, but she did as I said.

Then I lowered the ship until the rocket blasts were sweeping the plain before the monkey people's altar. I

moved in swiftly, then blasted with all I had. When the smoke cleared away that altar and its surroundings were clean for the first time in its foul history. Of the monkey people, and of that

skunk, Gurvey, there wasn't a sign. It was neat, and clean.

You didn't think I'd let even a rat like Gurvey be eaten alive, did you?

THE END

★ OUR AIR-MINDED ANIMAL FRIENDS ★

By AL HERMAN

LET us take a look at some of our air minded animal friends. What strange stories can they tell us?

Probably the second greatest of all the animal gliders is the "wandering albatross." One of these birds is known to have traveled 3,150 miles in about nine days. The wingspread of the albatross may exceed eleven feet. The albatross never appears to move his wings when he is flying; it seems to tilt its wings only slightly as it lets the wind carry its clumsy body for long distances. On land the albatross is a complete misfit. Its legs seem to be weak and unable to support the body. When an albatross is preparing to take off, he runs down a slope into the wind in an attempt to get a lifting force under his long gliding wings.

While the albatross may be the world's best glider, it cannot compare with the hummingbird in flying ability. A hummingbird has the distinction of being the only bird alive that can fly backwards. Not only can a hummingbird fly forward, upward, downward, and backward, but it can actually stand still in air. Think of the perfect wing control a bird must have that can defy the laws of gravity.

On land the hummingbird is even more clumsy than the albatross. The thighs of the hummingbird's legs are imbedded in flesh, and so walking is made impossible.

If the albatross is the second best glider, who then has the distinction of being the world's best glider? As a glider, the man-o'-war bird is perfection itself. This bird is an expert on wind currents and through the proper use of these wind currents stays in the air almost all of its life. It is even believed that these birds sleep in the air. This perfect glider seems to have lost its landing gear—for if it should land on level ground or even on an ocean surface, it could never again take off. Only by jumping into space from the edge of a cliff can it take to the air again. Yes, the same old story. The man-o'-war bird has become so specialized, that it cannot put one foot ahead of the other when on land.

Those interested in distance flying cannot but admire the Arctic tern. This fifteen and one-half inch bird can fly twenty-five thousand miles in

one year without a map. It seems that the Arctic tern loves perpetual daylight, for it will make two trips a year—from Greenland to the Arctic and back—so that it may live in this life of constant daylight.

The Arctic tern does not take the shortest route from northern Greenland to Antarctica. It flies along the coast of Africa and covers not less than twelve thousand five hundred miles. Since the Arctic tern will make two such trips a year—one in the spring time and the other at fall time—it actually covers twenty-five thousand miles a year. The mystery of this flight is how a young bird can cover this distance, over barren sea, and arrive at the same destination as its family. One might answer this question by saying that every young tern was taught from birth the migratory road. This, however, is not the case, since it is known that the young birds migrate first—and without any older guide.

Even the lowly spider may become air minded at times. The baby spider does not take to the air because he seeks adventure, he does so to escape his cannibalistic parents. If a baby spider were to stay too long at home, he would end up as a family meal. To escape this unfortunate fate, the baby spider spins himself a silk balloon and pushes off on a sunny day—when there is a good brisk wind. How far can this silk balloon carry the spider? When the ride originates near an ocean, the tiny spider may actually be carried to some far off land.

Even the ants may become air minded at times. Have you ever noticed winged ants during the fall season? It seems that about that time of the year, some virgin females and males are born with wings. The males are insignificant. They seem only to be able to follow one of the virgin queens. They (the males) cannot feed themselves, nor do they know the way home. After what John Beatty would call an airplane wedding, the queen ant returns to the ground alone. Wiling off her wings, she settles down to the task of starting a new colony. What happened to the male partner of this airplane wedding? He never returns alive—an unrequited hero giving his life for the cause of a future colony of ants.



Beneath his feet a board from the steps . . .

IS THIS THE NIGHT?

By ALEXANDER BLADE

*LIKE all prognosticators of the future,
he claimed to have made a mistake when the
time came for the prediction to come true . . .*

THE CAB driver said, "I mighta known that address would be stuck on top of some bill. There ain't nothing *but* hills in this here part of town."

Ray Long stretched his legs and abandoned his gloomy contemplation of the streaming windows. Rain like this, he reflected, was unusual even in California. Almost continuous thunder made conversation an onerous task, while great jagged bolts of fire split apart the night, illuminating the countryside with spectacular brilliance.

Swearing under his breath, the driver put the car in low gear and the slow ascent of the steep incline began. The twin windshield wipers stopped their rhythmic *swish-dak, swish-dak* and a curtain of water obscured the glass, cutting off even a partial view of the street ahead.

After an indeterminable number of minutes had passed, the cab lurched to a sudden stop and the engine died. The driver flipped up the meter flag with unnecessary violence and said, "This is it, mister. That'll be a buck-twenty-five."

Long fumbled in his pocket while he peered through the fogged side window. Beyond the sidewalk was a twenty-foot stretch of boggy lawn bordering a tiny wooden hungalow with a microscopic

front porch. Pepper trees flanked the house, leaving it in shadows despite the almost constant flicker of lightning.

Long paid the meter charge, added a modest tip and said, "I'll be out in a few minutes. If you're still around, I'll ride back with you. But I'm not paying a waiting charge."

He eyed the driving rain with open distaste, pulled the collar of his trench-coat about his neck and the brim of his felt hat over his eyes, then flipped open the cab door and raced with long-legged strides along the walk leading to the porch.

There, he stopped to shake water from his hat and the folds of his coat, then set his hand to the bronze-painted knocker.

A light went on in the reception hall, its rays visible through narrow panes of glass on either side of the door. A chain rattled and the door swung open a crack, disclosing a woman's face and a narrow strip of a flowered bousedress.

"Hello," Long said dourly. "I'd like to see Jonah Brown."

"Who are you?" the face asked. It was a young face, pretty, and framed in blonde hair that fell to the shoulders.

"Ray Long, of the *Chronicle*, miss."

"What do you want to see my grandfather about?" the girl persisted.

A LONG, earth-shaking roll of thunder forced Long to wait until his answer would be audible. He said savagely, "Maybe you haven't noticed but it's *wet* out here. And it costs a quarter to have a suit pressed. So if we *must* play question and answer games, let's do it inside, hunh?"

The girl continued to look doubtful, but she released the door-chain and widened the opening enough for Long to enter a small, modestly furnished living room. He removed his hat and trench coat, placed them on a rack near the door and turned back to the girl.

She was smiling in a friendly way, but there was a haunted expression in her eyes that puzzled him. She could not have been more than twenty.

Long said gravely, "I didn't mean to be rude. But our managing editor likes to send the cheap help out on assignments in this kind of weather. He wants me to get an interview from your grandfather."

She nodded. "Won't you sit down, Mr. Long? I'll ask Grandfather if he'll see you."

She turned and left the room, going along a hall that led to the rear of the bungalow. Long watched the swing of her rounded hips under the thin house-dress with casual appreciation. He ignored the chair the girl had indicated, fished a cigarette from a crumpled pack in the breast pocket of his suit coat and got it burning.

The girl came back almost immediately. "Grandfather will see you, Mr. Long. Please come this way."

He followed her along the hall and into a small bedroom off the rear of the house. It contained a wide bed, a small table with several bottles and a glass on its top, and a straightbacked chair.

There was a man in the bed—a huge-bodied man, with a thin angular face topped by a mane of thick white hair.

Large, deep-set eyes regarded the reporter from either side of a jutting, beaked nose. He lay propped up on pillows, a heavy book in one hand with a finger inserted to mark his place.

The girl said, "This is Mr. Long, Grandfather," gave the visitor a bright, mechanical smile and went out, closing the door softly behind her.

The man in the bed said, "Please sit down, Mr. Long." His voice was deep and resonant. He continued to regard the young man from the depths of those sunken eyes.

Long lowered himself onto the straightbacked chair, pinched out his cigarette and dropped the butt into a pocket. He said: "Mr. Brown, I represent the *Chronicle*. Our managing editor ran across a prophecy of yours in the old files of the paper—a prophecy you made twenty-five years ago. Perhaps you recall what it was."

"I do," Jonah Brown said calmly. "I predicted that the world would come to an end on January 10, 1920."

"Exactly." Long leaned back in the chair and crossed his legs. "We'd like to run an article, mentioning that prediction and explaining how the error occurred in your calculations."

The ghost of a smile touched the old man's thin lips. He said, "The reason is not obscure. I——"

LIGHTNING flashed suddenly, close to the window, and a blast of thunder shook the walls. Rain rattled against the room's single window, like the fingers of a skeleton seeking admittance.

The man in the bed waited until the sound of the storm had faded sufficiently for his voice to be heard, then continued:

"I failed to read, correctly, the message given to me by Almighty God. Long ago the truth was revealed to me,

young man. But in my haste to acquaint the peoples of the earth with their impending doom, I miscalculated the date when calamity would fall upon them. It was a trivial error, 'tis true . . . a matter of twenty-five years."

Ray Long blinked. "In other words, the world will be destroyed this year? In 1945?"

"That is correct," replied Jonah Brown steadily. "To be exact, on January 10, 1945."

An icy finger seemed to touch Long's spine. In spite of his carefully masked contempt for long-haired viewers-with-alarm such as the old man in the bed, he found himself shaken by the utter certainty in that deep voice.

"But this is January 10th, Mr. Brown. Are you seriously suggesting that this is the night it will happen?"

"I am not suggesting, my young friend; I am informing you of an unalterable fact."

"Of course," Long said hastily. There was no point in antagonizing the old goat. He glanced at his wristwatch. "It is now 9:25. It seems the old globe has less than three hours left to go. Lots of folks aren't going to like that."

He stood up. "Thanks for letting the *Chronicle* in on the facts, Mr. Brown. I'll send you over a copy of tomorrow's paper in the morning, with my article of our little talk somewhere on one of the back pages. You see, the impending

end of the world doesn't rate a better location with our managing editor."

The man in the bed nodded imperceptibly but did not speak. Long let himself out of the room, closed the door softly and moved along the hall toward the living room.

The blonde-haired young woman was nowhere in sight. Long shrugged into his topcoat and pulled his hat down over his eyes. The storm seemingly had passed; he no longer heard the surge of thunder and the brittle crackle of lightning outside the bungalow walls. He caught himself wondering if, twenty-five years from tonight, some other *Chronicle* reporter would be coming out to learn why old Jonah Brown's second prediction hadn't proved any better than the first.

He opened the door, took a single step . . . and froze there, both feet on the threshold.

He was staring at . . . *nothing*. The street was gone, the hill was gone, the myriad lights marking the city were gone.

There was only black eternal infinity.

His stricken mind refused to accept what the eyes testified. Instinctively he turned to flee back into the home of Jonah Brown. It too had disappeared.

He sought frantically to maintain his balance on the threshold—now a single plank. Slowly it tilted and sent him spinning into space. His scream—

SCIENCE FREEZES GERMS

THE U. S. Department of Agriculture is always on the alert for methods to make the foods we eat purer and more healthful. Some time ago they perfected a method whereby the trichinae can be destroyed in pork and thus prevent the dread disease called trichinosis.

The process is really very simple and involves only that the pork be frozen for a number of days depending on the thickness of the pork cuts.

If the pieces of pork are less than 6 inches thick they must be stored for twenty days if

the temperature is 5° F. The colder the temperature the less time is needed and so only ten days are required at a temperature of -10° F or six days if the meat is stored in a place where the temperature is -20° F. If the pork is from 6 to 27 inches thick, it must be stored for twice the number of days listed above except at the 5° F level where the time is only 30 days.

This method is now being used by meat packers all over the country to insure that the pork going to the men of our forces and to the civilian population is pure and safe.—A. Morris.

COMET FROM



YESTERDAY

By **LEE FRANCIS**

***OUT of the past came a grim
missile from space, its secret
buried deep in an unborn volcano . . .***

A QUARTER of a mile up the steep slope of Tepicol Valley, a killer was stretched on his belly, sighting carefully through the cross-hairs of a telescopic rifle. The hunter wasn't satisfied. He had plenty of time, and the sun had not yet burned his temper to the necessary heat.

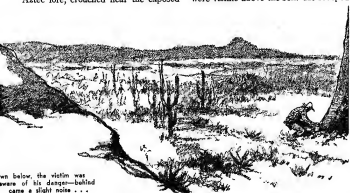
The stage, a dark valley where Aztec skulls still bleached, was set.

Jim Rand, an archeologist seeking Aztec lore, crouched near the exposed

roots of a giant palm. He wiped sweat from his chin and pushed steaming glasses higher on the ridge of his nose. Rand's height made his present position uncomfortable. A fly lit on his cheek as he worked and he brushed it away impatiently.

So engrossed was he in finishing his job that both the sun and the cramped position were forgotten.

At least six inches of the rock slab were visible above the soil. He scooped



own below, the victim was aware of his danger—behind came a slight noise . . .

eagerly with his hands, eyes brightening as more of the stone came into view.

Rand was sure that it was an Aztec picture rock.

What startlingly new light would this throw on the history of the temple builders? Hacking away the last root, he drew the stone slab from the ground. The slab was about two feet square. The symbols were clear on its surface. A whistle escaped his lips.

Only the upper half of the stone had come from the ground. The lower edge was jagged and broken. He put the precious object down carefully and started to dig again. It was useless. Only broken, pulverized bits of gravel came to the surface. The growing roots had destroyed the lower part of the stone.

Standing up, Rand stretched carefully, removed his glasses and started to polish them on his shirt front. The sunlight playing on rumpled brown hair, and across the red and green checks of his shirt, made him a clear-cut target.

The killer, still waiting, smiled softly and squinted through his sight with added care. His trigger finger stiffened, then curled slowly about the trigger.

JUAN, though only fifteen, had the responsibilities of the world on his thinly clad shoulders. His boss, Señor James Rand, was alone somewhere in Tepic Valley.

Juan, barefooted, swinging a heavy bush knife against the green wall of the jungle, moved ahead with renewed speed.

What Señor James Rand found in Tepicol that was better than food, Juan could not guess. James Rand had left while he, Juan, was yet asleep, and Juan lost no time in searching for him.

Perhaps it was the sudden flash of a gun barrel like a tiny mirror against the

sun. More likely it was the single buzzard circling high over Tepicol that caught Juan's eye and stopped him in his tracks. Assuredly it was the second flash from the polished barrel of a rifle that sent Juan scrambling up the steep bank at the edge of the valley.

The sand was soft between his toes and the bush knife, sharp as a razor, hung with the handle in the palm of his tough hand.

Juan moved swiftly along the crest of the hill from palm to palm, creeping like a snake through the undergrowth of vines. He heard the loud click of the rifle chamber as a bullet snapped in, and the movement of a man ahead of him.

Señor James Rand, almost a god to Juan, was somewhere in the valley below. That left but one answer. Juan hugged the ground, moving inch by inch over the last rise between him and the killer.

The buzzard, sensing what was taking place, wheeled in a wide circle above.

The man with the rifle was barely eight feet ahead. Juan saw his feet, pointed outward, and the left elbow buried in the sand. Juan was on his feet, slim and ragged, with weapon poised like a small god of vengeance.

The killer had his rifle aimed. In the brush, a toucan set up a raucous call and, hidden by the sound, Juan sprang. He was across the clearing in an instant. The rifle spoke, clear and sharp against the day, but the aim had been disturbed.

The killer pulled the trigger hurriedly, twisting over as he did so, to ward off whatever was behind him. His face, twisted into an ugly snarl, suddenly turned white.

Juan was over him, and the bush knife plunged downward. The man with the rifle had only time to utter one

protesting scream of pain. His fingers closed around the sharp blade, tried to force it from his stomach, and became motionless in death. The bush knife had entered the belly at the navel and its point was buried in the sand beneath him.

Juan felt cold and without emotion. Above him, the buzzard turned lazily, changed the focal point of his interest and waited patiently.

JIM RAND, too engrossed in his work to notice the buzzard or the flash of the rifle barrel, recognized the sudden crack of the rifle. He went down like a rock, rolled over quickly and came to his knees. Releasing both pistols from his holsters, he tried to detect some movement in the direction from which the shot had come. The day was silent; then, high pitched above the cry of the toucan, came Juan's voice.

"Señor James Rand, you are not keeled?"

Rand relaxed, pushed the guns back into their holsters and stepped into the open.

"Juan, you son-of-a-gun, come down here. What the hell happened?" Then came Juan's cry of joy and the sound of his bare feet running and slipping down the hill. He ran swiftly toward Rand, the bloody bush knife in his grasp.

"It was one of Señor Ernst Miller's men," Juan cried breathlessly. "He was ready to shoot you with big gun. I kill him."

Rand put one hand on the boy's shoulder.

"Steady, son," he urged. "You killed Miller's man?"

Juan caught his breath and launched into a garbled description of what had happened.

"Señor James Rand should not go out without Juan," the boy ended. "Miller,

what you call Fascist, ready to kill you first chance."

Rand's face had gradually darkened as Juan spoke. New anger was there. Calm, terrible anger that burned deep but left his mind clear.

"You're a good kid, Juan," he said.

"I owe a lot to you. We'd better bury the corpse before the buzzards get it or Miller discovers what has happened. Miller's got power with the local police. He might make it tough for both of us."

Juan's shoulders squared.

"You and I make plenty trouble too," he said.

THE grave was shallow, but well-hidden by the undergrowth of vines. When the job was done, Rand returned to the Aztec picture rock. His score with Miller would have to wait. Now the stone seemed more important. With Juan's help, he carried it carefully to an open spot where the light was better.

He studied it for a long time, becoming more and more puzzled over the odd, faded pictures painted across its surface. Finally he looked up at Juan who waited close by.

"Juan," he said in a hushed, almost shocked voice. "Have you heard of Parangaricutiro?"

"Long time ago I hear of town that name," the boy said hesitantly. "It is in mountains, very old, old town. Aztec ancestors have big temples near there."

Rand stood up slowly. A frown creased his forehead.

"Juan, if this stone is the real thing—and I have reason to think it is—every man and woman in Mexico City may be dead in a week. The North American continent may suffer from tidal waves and cosmic disturbances the like of which we've never dreamed."

Juan's head tipped to one side. His brown eyes reflected bewilderment.

"How you can kill all those people?" he asked. "Cos-mic waves. They are bad, huh?"

Rand picked up the stone.

"I think Juan," he said, "that I'd better get this into more capable hands. You're going to have to do without me for a day or two."

"You go away?"

"To San Diego," Rand answered grimly. "The Aztecs were marvels at astrology. If I've read correctly what is written on this tablet, every government in the world will be sitting on dynamite during the next week. There's going to be hell to pay, and the remainder of this stone would help a lot in preventing it. We'll have to do what we can . . ."

THE airport at Urban was controlled completely by the power of Dr. Ernst Miller. Miller himself was no more doctor than the Mexican boy, Juan. German, fat and pompous, he had attached the title to himself to impress those about him.

Ernst Miller, hoping against hope that Hitler would stop the rush of Allied armies across Europe, was waiting for the Nazi invasion of the Americas. His hidden rifles were growing rusty and his jungle airports, built to land invasion troops, were run down and in poor condition.

Now, of all times, he was not anxious to have Mexican and American citizens prowling about his jungle domain. If they should stumble on to one of his hidden fields, who knew what his punishment might be. Mexico and the United States were co-operating too closely for his peace of mind.

Ernst Miller was a fat, owlsh man with white bushy eyebrows and stone gray hair. His misshapen stomach gave an impression of sloth that was misleading.

Sitting in the small office of Urapan Airlines, he gave instructions.

"You—Alvarez!" A little Mexican stepped forward and saluted. "See that no strangers are allowed near the field during the takeoff today. I have reason to suspect that my friend, Rand, will try to make a run for it."

Pedro Alvarez smiled and patted his old army rifle.

"Good, Señor! This Señor Rand, I will recognize him?"

Miller snorted.

"He'll be the only white man around if he shows up. That won't be hard."

He dismissed Alvarez with a nod of his head and turned to the sallow-faced youth, dozing near the window.

"Herman!"

Herman Wassler, Miller's closest ally, moved lazily and sat up.

"You can't let me rest a minute, can you, Doctor?"

Miller glared at the youth. He leaned forward over his desk.

"You think Rand is down here on government business?"

A sneer twisted Wassler's thin face.

"I think he's a big, good-natured boob, fresh out of college, with one thought in mind."

"And that is?"

"Cover himself with glory by digging up some bit of Aztec stone. Odd, these Americans. Their country is in danger of losing a war, and they putter about with shovels, digging up past history."

Miller looked thoughtful.

"I'll play safe," he said. "Rand's down here and I'm making sure he doesn't leave. Kuhn tracked him this morning. I told Kuhn if the chance for a good shot presented itself, to get rid of Rand the easiest way."

A smile, arrogant and self-satisfied, parted Wassler's lips.

"Killer Kuhn doesn't fail to carry

out orders like that," he said. "You can depend on Rand's early exit from this world. As for me, I'm getting very hored with this living death. Our soldiers are seeing action back home. Sometimes I wonder . . ."

"Wassler!" Miller's voice cracked like a whip. "You're about to say something against our method of fighting a war. I warn you again. I'll listen to very little more of your fantasy. The Fuehrer knows best. We shall be engaged in an invasion when he thinks the time is right."

Wassler and Ernst Miller often disagreed; but Miller's domineering attitude was wearing Wassler's temper thin. He wondered if he was a member of the Master Race or a hunch of master fools. Time, curse its slow passage, would tell.

RAND noticed the armed figure of Alvarez, patrolling the edge of the Urapan Airport. He knew that Miller was around, because Miller's private plane was warming up at the far end of the field. The Mexico City plane, a ten-passenger transport, was waiting in front of its hangar.

Rand decided to play safe. If Miller was on guard, Rand would stand no chance of getting off the ground. With the information that the Aztec stone had given him, Rand could afford to take no chances.

"Are you willing to take a chance of getting shot?" Rand asked the Mexican youth.

Juan grinned.

"Take chance already," he said. "No harm."

"Good." Rand drew the boy into the underbrush. "Get out of your clothes."

Juan looked puzzled, then took off his ragged shirt, baggy trousers, and wide straw hat.

Rand got out of his own jacket and pants and they switched clothing hurriedly.

Juan looked like a baggy scarecrow; and Rand, with clothing three-quarters his size, seemed about to burst out of Juan's trousers and shirt.

"Stay at the far end of the field," Rand said. "I'm going to get to Miller's private plane if I can. Make sure that guard sees you, but keep out of firing range. At a distance, you may pass for me."

Juan nodded, hacked into the forest and disappeared. Rand waited. The distance to Miller's plane was short, but the field was open and a mechanic was at work on the plane.

He saw Juan at the far end of the field. The Mexican boy was only partly visible, but the leather jacket and whipcord trousers made him resemble Rand slightly.

Juan walked out on the field. The armed guard saw him and shouted for him to halt. Juan seemed not to hear, but walked calmly away keeping in plain sight.

Alvarez raised his rifle and fired.

The shot fell short, but it brought Miller and Herman Wassler dashing from the office.

Rand saw his chance.

He dashed across the gravel behind the office, then ran at a trot down the edge of the field toward Miller's plane.

Juan kept on going, always close to the trees, and yet in sight of the three men. Alvarez started to run toward him, and Juan darted into the jungle out of sight. Miller and Wassler both followed Alvarez.

Rand was close to the plane now. He noticed that the mechanic had looked up, and was watching Miller.

"Señor mechanic," Rand spoke broken, uncertain English. "Señor Miller asks your help at once. That

Rand is in the jungle."

The mechanic jumped down, wiped his hands on his overalls hurriedly and drew a pistol.

"Thanks, bub," he said.

Rand kept his face averted and the mechanic started to run toward the spot where the others had disappeared into the forest.

Rand noticed that Miller's plane was a fast, single-seated job and the motor was turning over smoothly.

With a leap he was on the wing and into the cockpit. He dared not wait, but gave her the gun and shot across the apron toward the runway.

He turned the machine quickly and headed north. The engine roared wide open and he left the ground with a smooth rush of air.

He could see the small cluster of men near the jungle edge. Alvarez, rifle in the air, was firing as fast as he could reload. He might as well have been shooting at the moon.

With a satisfied grin, Rand leveled off at five thousand feet and got his bearings.

His expression sobered as he remembered again that this trip was perhaps the most important one he had ever made. He hoped fervently that Professor Waldo Frazer would be at home and that he could believe enough of Rand's story to insure a quick visit to Mexico.

Disaster, swift and terrible, was about to strike. Could he make his story bear enough weight to convince a hard-headed man of science?

PROFESSOR Waldo Frazer, member of the American Meteor Society, had retired. San Diego was a warm, pleasant place for him to spend his declining years. Not that Frazer was an old man. Perhaps fifty, with an iron gray beard and stern high cheekbones,

Frazer had given up the study of meteors when his wife died. His daughter Frances had been brought up with all his love lavished upon her. Father and daughter lived together. They seldom mentioned Frazer's former work, but when it was discussed, he refused to express any interest in it.

Together in the library, they were discussing the wire received from Mexico City only an hour before.

"It will be nice to see Jim, of course."

Frances sat on the arm of her father's chair, her light dressing robe falling away to expose slim, smooth legs.

"But, Dad, Jim's such a bore. There's something about his glasses, his eternal digging for history, that makes him completely uninteresting. I'll bet he'd blow up under any kind of excitement. I'm never sure whether he's modest and quiet or just backward and afraid of life.

Frazer smiled.

"This wire doesn't sound very retiring," he said.

ARRIVING VIA PAN-AMERICAN TO-NIGHT STOP DESPERATE TROUBLE AFOOT STOP MANY LIVES AT STAKE NEED YOUR ADVICE

J. RAND

"I suppose we'd better find out what time he's due," she said.

Frazer waited until she had spoken to Pan-American, then went to the closet for his coat.

"In half an hour, eh?"

She nodded.

"You want to go down, or shall I meet the plane alone?"

Frances winked at him.

"Don't get me wrong, Dad, just because I say Jim's a bore." She went hurriedly toward the stairs. "He's handsome for all of that. I'll be ready in a jiffy."

In spite of his daughter's failure to see Jim Rand in a serious light, Professor Frazer was worried. Rand hadn't visited them for a year. During that time, Frazer had often wondered what had become of the younger man, knowing only that he was somewhere in Mexico. Frazer liked Jim Rand. They had been friends when Frazer taught at Yale.

Frances came down, tugging at the sleeves of a short, red coat, hat to match perched carelessly on one side of her brown curly hair.

"Ready!" she said, and her father followed her across the hall toward the rear door. She backed out the car. Climbing in, Frazer settled back comfortably.

"Kindly avoid all curbs and lamp posts," he said with a chuckle. "I'd like to be in good condition to meet Rand. Do you think you can drive with a little more caution than usual?"

Frances smiled, and turned the car into the street on two wheels.

"IT'S impossible to decode the full message, Professor," Rand said earnestly. "I am only a student of Aztec symbols. However, here is as much of the message as I could make out without leaving any doubt in my own mind."

He removed his glasses from his pocket, polished the lenses carefully and placed them on his nose.

Frances, sitting on the far side of the room, gave her father an "I told you he's a bore" look, and then adopted an expression of rapt interest. Rand started to read from a paper he had taken from his briefcase.

"*And Xerxes, High Astrologer to the court of Montezuma, states with certainty that on the 12th day of the—* (here the message included a group of complicated figures from the Aztec

calendar which I was unable to decipher)—*the Black Comet will rush from the sky and destroy the city of Tenochtitlan (Mexico City). Xerxes, with the instructions of Montezuma, has taken steps toward preventing this catastrophe. Three hundred slaves and prisoners of war from the neighboring Republic of Tlascala have been sacrificed to appease the wrath of the Gods of Destruction. When the Aztec empire, grown powerful with centuries of good ruling, faces this power from outer space, they will remain unafraid, in the knowledge that Xerxes has . . . Parangiricutiro.*"

Here, Rand stopped reading, removed his glasses, and folded the paper carefully. For a long time the room was silent. Then Frazer cleared his throat.

"I assume that those calendar references were checked by you?"

Rand nodded.

"Not as closely as I intend to have them," he admitted. "Allowing for some difference, this *Black Comet* should be visible at the present time, and should hit earth in about seven days."

A gasp escaped Frances Frazer's lips.

"But, Dad—it's impossible. That message was recorded hundreds of years ago. It can't be—"

Frazer held up his hand for silence.

"I'm afraid this is beyond your knowledge, child," he said gently. "I'm inclined to agree with Jim. The Aztecs were far ahead of us with their study of astrology. In some ways their predictions have been uncanny. At least they believed that precautions must be taken."

"That's what worries me," Rand interrupted. "What precautions? The remainder of the stone could have given us the answer."

Frazer arose and walked to the win-

dow. For some time he stared up at the star-lit sky. When he turned, Rand saw a longing in Frazer's eyes that he had not seen for years.

"Jim," Frazer said haltingly. "I haven't been near my old work for years. I'm not even sure I could spot your *Black Comet* if it existed. I'd like to try. If it's there, and we can see it, I'll go to Mexico with you as fast as a plane can take us."

Rand stood up eagerly.

"I hoped you'd say that, sir."

Frazer smiled.

"To gain access to the proper telescope equipment, we'll have to tell others about your find. I'm afraid the press will hear of it."

"It might cause quite a stir," Rand said. "Can't we remain silent, at least for the present?"

Frazer shook his head and smiled sadly.

"With a city in danger, and perhaps the whole western world feeling the results of such a blow, I'm afraid the news is too important to keep to ourselves."

Rand nodded and Frazer went on:

"It may be a false alarm. Let's hope so. For the time being we'll consult the sky for an answer. I hope we find nothing unusual among the planets tonight."

PROFESSOR FRAZER left his post at the giant telescope and climbed slowly down the steps to where Rand and several men of science were waiting.

"It's there, all right," he said. "You've all seen it, or at least seen the part of the sky it blots out. Mars is gone completely from sight. There's only one explanation.

"The Aztecs, working with mathematics and skill we know nothing of, predicted this hundreds of years ago.

There is no way for us to know that it will hit earth, or where it will strike. Yet, the story has been confirmed."

A door slammed, and hurried footsteps sounded from the lobby. One of the group turned, facing Frazer.

"The press has its story," he said. "The public will have the nicest scare it's had in years."

Frazer remained serious.

"Gentlemen," he said, "I view this with alarm. The Aztecs were a powerful race. They didn't jump at shadows. The rest of you can do what you wish. I'm starting for Mexico this afternoon. I'll appreciate all the cooperation I can get from you in the way of mathematical figures and movements of the *Black Comet*."

"I move we name it the *Black Comet*, and enter it as such on the records," someone offered. "Although I can't agree that because a bunch of savages went star gazing, that we, a civilized people, should have cause for alarm."

Bitterness welled up in Rand's mind, but he held his tongue. Frazer, suddenly straighter and younger looking, was handling the situation well.

"Gentlemen, you do what you wish. I warn you that you'll have your hands full when this story reaches the American and Mexican people. I have no doubt that Mr. Rand has discovered a bitterly truthful account of what is to happen. I'm going to work with him constantly until we find an explanation. Meanwhile, you'll keep in contact with us?"

A polite murmur went up from the others.

"Thank you," Frazer said. "And now, if you'll accept our gratitude for helping with the first step, we have other business to attend to . . ."

WHEN Rand and Waldo Frazer reached San Diego, the streets

were filled with newsboys selling extras. Pseudo-experts had already dragged enough old stuff from the files to insure quick destruction of the world by the *Black Comet*.

HUGE COMET BLOTS OUT SKY; THREATENS DESTRUCTION OF ENTIRE EARTH

San Diego, March 6—It was announced here tonight that a new comet, a black comet of destruction, has blacked out a portion of the sky and is hurtling toward earth at terrific speed. Just when the collision will occur, no one can say. It is believed that no possible steps can prevent such a collision.

Experts agree . . .

Rand tossed the paper away disgustedly.

"Americans either make a sideshow of tragedy," he said bitterly, "or ignore it completely."

Frazer was preoccupied.

"I have several errands to run," he said. "I'll contact Professor Girand at the U. of C. He's a bug on old languages. We'll arrange to put a photo of the stone in his hands by telephoto from Mexico City. He can phone us a complete translation within a few hours. We'll need survey equipment, suitable clothing, and a light fast car. You have a guide down there?"

Rand smiled.

"The best," he said, and remembered that the last he had seen of Juan, the boy was running into the jungle, clad in Rand's clothing.

"AND you think you can go merrily away to Mexico without taking me along?"

Frances Frazer, balanced daintily on the arm of her father's chair, put a small finger under his chin and lifted it until their eyes met.

"You've a plane chartered and it will hold four passengers. That means the

pilot, Jim, yourself, and me."

"But the danger?" Frazer started to protest. He was beaten before he started.

In the hall, Rand was talking with Washington on the telephone. He hung up finally and returned to the study. His face was red and excited.

"It seems we've reached an important audience," he said.

Frazer nodded soberly to his daughter.

"Pack up your hiking clothes. You win." He turned to Rand. "Who was it?"

"The President," Rand said with awe. "He put through the call and kept the wire open directly to his desk. He wanted every detail from the time I entered Mexico."

Frazer whistled.

"The verdict?" he asked.

"The Army is ready to give us assistance the moment we have definite proof," Rand said. "Mexico's president has contacted Washington on the strength of the newspaper accounts, and has equipment waiting for us when we reach Uruapan. A B17 bomber is waiting for us. Frazer, both countries want to see that stone and see it in a hurry."

Frazer hurried to the stairs and called to Frances.

"Never mind packing," he said. "Get down here at once. We'll find clothing at Uruapan."

He turned back to Rand. "If action is what they want, and we've a clear sky for flying, what are we waiting for?"

RAND had worried a great deal for the safety of Juan, the Mexican boy. Because they landed in an Army B17, and a number of officials from Mexico City greeted them at the airport, Ernst Miller stayed very much in

the background. The big plane discharged its passengers and took off again, headed north.

With it had come complete field-ration kits, clothing, an army jeep to be used for rough country, and the extra items Professor Frazer had brought for his own use.

Ernst Miller, forced to be on his good behaviour, greeted Rand.

"I have you to thank for the return of my plane, Mr. Rand. I hope you and Mr. Frazer and his daughter have a pleasant stay in Mexico. The pilot who flew my plane back from Mexico City said you paid him."

Rand nodded.

"Thanks again for letting me use it," he said soberly.

Miller continued to smile, shaking hands with Frazer.

"Mr. Rand is quite a friend of mine," he told Frances. "I've been trying to help him in his research work here. I even sent a man out to assist him, but I haven't heard what work Mr. Rand put him to."

The conversation was obviously meant for Rand's ears.

Professor Frazer was superintending the movement of the baggage to a small truck. The jeep would be for themselves. Two privates had been detailed to drive the cars.

Miller still talked with Frances. Rand had overheard the portion meant for him.

"You'll find the jungle country hot," Miller said. "Mr. Rand thought so, and Rand is a hardy man. However, it gets still hotter about this time of year. I doubt if even Mr. Rand will be able to withstand much more of the climate."

Frances was murmuring something about being able to take it, and Frazer shouted that the last bit of stuff was in the truck. Rand turned away from the

Mexican to whom he had been talking.

There was a sudden shouted warning from near the office of Uruapan Airlines. Herman Wassler darted out and around the building out of sight.

He came back almost immediately, holding a Mexican boy firmly by the arm. The boy wore a large leather jacket and whipcord pants which were much too large to be his own.

"Wassler." Miller's voice was commanding. "Let go of him."

Herman Wassler looked startled for a minute, but he released his grip. Immediately Juan rushed across the field to where Jim Rand was standing.

"Señor Rand," he said. "I am so glad you come back. This man had me locked up."

"This kid must be crazy," Miller said calmly. "I've never seen him before."

Rand interrupted him.

"He's my guide," Rand said coldly. "I'll take care of him."

A Mexican soldier came toward him.

"Señor, the truck, she is ready."

Rand turned to Frazer.

"I suppose the sooner we get the stone, the faster we can get to work."

"But the stone, it is gone, señor!"

Rand whirled, facing Juan.

"Gone?"

"Yes, señor. The day I saw you fly away, I escaped into the jungle. I went back to Tepicol, but the stone was gone."

"You're sure you found the right place?" Rand demanded.

"Sure, Señor James Rand. Juan is sure. I saw Miller and Wassler take it. They follow your tracks to the place you dig."

ERNST MILLER growled something under his breath. Then a triumphant grin crossed his face. His eyes narrowed. He turned to the Mexican

officer in charge.

"You see, señor?" he asked icily. "These Americans have made a fool of you. I'll tell you what happened. This man is spying on the Mexican government. He thought to get information for the Axis. One of my men followed him and was murdered. Rand escaped in my plane, then trumped up a wild story about a *Black Comet* to excite your government and return with extra aid for his work. It was clever, Señor Rand, very clever. Fortunately I am a loyal friend to Mexico. I was on guard."

This speech took the Mexicans by surprise. They fidgeted and started to whisper among themselves. After all, Señor Rand had come in the name of the United States. They did not know just what to do.

The officer in charge, a short, dark-faced man, stepped toward Rand and saluted stiffly.

"Do you care to reply to this man's charges?"

Rand shook his head.

"Our whole work depends on that stone. Without it, I can't say or do a thing to protect us. Mr. Frazer and his daughter came here at my request."

"I think it best," said the officer, "for you to remain at Uruapan until this has been discussed by our governments. It will not take long."

"But—the time element," Frazer protested. "There is little——"

Ernst Miller laughed aloud.

"Time is something we have much of in Mexico," he rumbled.

Miller turned to the officer.

"I will see that some of my own men watch the hotel where these three people are lodged," he said.

The official stiffened.

"That will not be necessary."

"All the same, señor," Miller said, "a couple of men with rifles will not

be useless. They might prevent some military secret from escaping to an enemy government."

He turned toward Rand and deliberately winked.

THE stay at Uruapan might have been bearable if Rand hadn't realized how little time they had left to work. He had no knowledge of what was being done to establish their honesty of purpose. Little *could* be done. Without the actual stone, neither country could be sure that he was more than an impostor. True, the *Black Comet* had been sighted, or rather the space which it covered had been blacked out. Still, would the comet's presence necessarily mean a threat to the Earth?

At the hotel they were given two rooms. Rand shared one with Frazer, while Frances had a small room to herself. They were well fed and the two soldiers remained to look after them. Rand felt sure that Miller had several men posted near the hotel, ready to shoot him down on the slightest possible excuse.

The afternoon wore slowly on.

Rand couldn't even be sure that Waldo Frazer trusted him entirely. Yet Frazer was different from other men. He had a deep insight into life and character.

Frances had bathed and they all sat together in the small lobby. A fan blew away the worst of the heat. An Army private remained in the background, pleasant enough, but alert.

"The next move, as I see it," Frazer said abruptly, "is to find that stone and find it in a hurry. It's the only evidence we have."

Rand thought of Juan. If Miller hadn't recaptured him, the Mexican boy might prove to be of some help. Where would Miller hide the stone? His reason for stealing it was obvious. It

was the quickest way of getting Rand out of Mexico.

"I'M GOING out of here tonight," Rand said in a low voice. "I think Miller has the Aztec stone. He won't make any use of it, other than to keep us from finding it. It would suit his purpose if Mexico and the United States have trouble. More so, if any part of Mexico is destroyed. There are a lot of superstitious natives down here. Some of them might blame the catastrophe on our government."

Frances gasped.

"But that sounds impossible."

"Nothing is impossible in time of war," her father assured her. "Rand is right. We've got to leave here."

"I'll try it alone," Rand corrected him. "Miller's men are crack shots. From the time we leave here, we'll be escaped prisoners in the eyes of the law. I think I can evade Miller. I don't want either of you to take that chance."

Frazer protested, but Rand won him over.

"You can't leave Frances alone," Rand said finally. "And she certainly can't be sent out where Miller's marksmen can take a shot at her."

It was agreed that Rand should go alone. Frazer was to keep his door locked and allow no one in during the night. Rand would attempt to get the stone, or at least contact Juan, and return before morning.

As they went to their rooms, Frances Frazer stopped Rand on the stairs. Her eyes were a little moist as she clung to his arm.

"Jim, I've said some pretty sarcastic things about you in the past."

Rand grinned.

"'Sissy boy' Rand, huh?"

Frances turned red.

"You knew?"

Rand put his hands on her shoulders.

"I know that my work seems unexciting to you," he admitted. "Some day I'll try to make you understand it. Whatever you may have thought, forget it. You're forgiven. From now on, we're friends."

She smiled up at him almost tenderly.

"Jim—be careful tonight—for—our sake."

The light warmth of her kiss on his cheek, and she was gone, walking swiftly toward her room.

Rand took off his glasses, clearing them on his handkerchief and stared after her.

"My, how my life is changing," he said softly.

THE escape from the hotel was easy. One soldier had been posted at either end of the corridor on the floor where Rand's room was located. He slipped down the drain pipe outside the window and disappeared into the rose garden beneath it.

The night was cloudy and overcast. He breathed a sigh of relief when, after reaching the soft earth under the window, none of Miller's rifle men had taken a shot at him.

Ernst Miller owned a large, rambling adobe home near the Urupan air field.

Once away from the hotel, Jim Rand walked swiftly across the town, and followed the open road until Miller's place was visible ahead of him. The house itself was backed up to heavy undergrowth that extended to the hills. The kitchen was built against the hill, so that the roof was even with the slope.

Rand left the road and carefully worked his way toward the back of the house. On his hands and knees he crept forward, listening for some sound that might mean the presence of a guard.

It was well that he used caution.

Close to the low roof, about to trust himself in the open, he heard the sudden snap of a twig. Rand froze in his tracks, listening.

Silence for a long time, then another cautious movement, coming closer. Rand drew his pistol and waited. He sat back on his haunches. The moon was under the edge of a cloud. He made out a movement a few feet ahead, then saw the figure of a man creeping slowly toward him. A knife glinted dully.

Rand's breath was low and even. His hand tightened about the grip of the gun.

The figure near him hesitated.

"Señor Rand?"

Something inside of Rand snapped like a broken spring and his gun hand lowered. He covered the few feet swiftly, grasping Juan's hand.

"I damn near shot you," he whispered. "How did you get here?"

Juan placed the knife beside him on the ground.

"It is the stone," he whispered. "I saw Wassler take it from the office safe and bring it here. He and Miller are looking at it in the lounge of the house."

Rand chuckled.

"Imagine Miller trying to read an Aztec picture message." Then his eyes grew cold. "We've got to get that stone, understand, Juan?"

The Mexican boy touched the handle of his knife.

"I am glad you are here to help, Señor James Rand," he said simply. "It might have been difficult."

Rand stared at him.

"You weren't going in there—alone?"

Juan nodded.

"You are in bad spot," he said. "I try save you from trouble. Miller is one bad man."

Rand sighed.

"I wish I had a dozen like you," he

said. "I've a feeling we've just got started."

ERNST MILLER was worried. Not once since he came to Uruapan had the local authorities questioned him. Now, trying to puzzle out the meaning of the Aztec stone, he found certain details that troubled him deeply.

"Maybe all that rot about comets was true enough." He turned savagely to Wassler. "But this stone has one message that's clear enough to demand action in a hurry."

Wassler, trying to show the proper interest, nodded.

"The picture of the mountain near Parangaricutiro?"

Miller grunted. The stone was on the table before him. He leaned over it, tracing the outline of a high, round-topped mountain that had been traced in the lower corner of the stone.

"Our field at Parangaricutiro is fully equipped. It has two dozen planes; a munition dump and enough material to wreck the whole lower section of the country. It's well hidden, but if a lot of nosey Mex's get down there, they might run across it. We can't take that chance. Rand wrote down everything he found on the stone. Sooner or later he'll find the mountain that looks like this picture. If he does, we're in hot water."

Wassler grimaced.

"Kuhn didn't have much luck with Rand."

Miller's next words were angry.

"Rand—or his boy—killed Kuhn. Kuhn was my best man. It's your turn to have a try at getting rid of Rand, Wassler."

"You think I can't do it?"

Miller frowned.

"I can't depend on you the way I used to," he said. "But I guess you hate Rand as much as I do. Make

sure, when you pull the trigger, that there isn't someone behind you with a knife in his hand."

Wassler shuddered.

"I'll make sure."

Miller went to the window and stared out into the night.

"Tonight is as good as any," he said.

"Rand will be at the hotel. He'll walk by his window sometime between now and breakfast time. You'll have a fine shot if you wait across the street. Now get going."

Wassler went into the other room, and came out with a telescopic rifle. He stood near the door, fondling it in his hands.

"Now I've got something to do," he said. "Now I won't be sitting still, waiting to go crazy."

Miller nodded, and Wassler went out the front door. Miller heard him enter the small car and listened as the sound of the motor faded into a distance. Then he arose and poured himself a drink.

RAND heard the car leave the front of the house.

"Juan," he asked, "were Miller and Wassler here alone?"

Juan nodded.

"I have watched the house for long time. Servants all go. Wassler and Miller alone. Now maybe they both gone?"

Rand shook his head.

"I don't think so," he said. "Unless they took the stone with them. There's light reflecting on the side lawn. One of them probably is still in the house."

Together they left the hiding place behind the house and edged along the side wall until Rand, a little ahead, had a full view of the room. He saw Miller leaning over what he was sure was the Aztec picture stone. As he watched, Miller left the table and moved out of

sight into the next room.

Rand turned.

"You go to the front door," he said. "Knock, then wait until Miller comes. Give him some cock-and-bull story about being angry at me, and wanting to help him. Stall as long as you can. Tell him you want to get even with me, and offer to do the job."

Juan moved away soundlessly toward the front of the building. Rand adjusted his holsters within easy reach of both hands.

He heard Juan's knock. Miller looked toward the front hall, then moved across the room toward it. Rand waited until he could hear faint voices coming from the front door. He tried the window gently, then with all his strength.

It was locked.

Rand drew out one of his pistols, held the barrel firmly in his right hand and brought the gun butt down against the glass with all his weight. He heard a sudden shout of anger and scuffling footsteps from within. Rand did not hesitate. He ran the heavy gun across the broken glass, smoothing the edge of the window casing. Then he vaulted through the opening into the room. Swiftly he reached the table and picked up the picture stone. It was heavy but he managed to get it back to the window.

"Stop where you are, or I'll shoot."

Rand thought swiftly. With all his strength he pitched the stone ahead of him through the broken window. It hit with a thud on the lawn outside. Rand dived forward, rolled over quickly and came up with both pistols roaring.

Miller was at the door, his face covered with blood. He held a rifle, firing as he moved forward.

Rand felt a cutting, searing pain in his leg. Miller stepped quickly into the protection of the hall and fired again.

The bullet came close, but not before Rand could get behind a heavy oak table.

What had happened to Juan?

There was a long silence. Rand thought of Wassler and wondered when he was coming back. He knew Miller would get him if he showed himself.

Rand waited. Then a sobbing, cry of pain came from the hall. Quick footsteps and Juan staggered into the room and fell face down on the carpet.

In an instant Rand was at the Mexican's side. Rand rolled him over slowly, lifting his head into his arms.

"Juan?"

Juan's eyes opened.

"Miller—feel—knife," he whispered. "Miller—not harm the señor again. Look out for—Wass—"

His eyes rolled back and the neck muscles relaxed. Rand put the boy down softly, then rubbed the sleeve of his shirt across his own eyes.

Juan was dead, but Miller would do no more harm. It was clear to Rand, as soon as he went into the hall, what had happened. Miller was lying face down, Juan's bush knife buried in his back. Juan must have been arguing with the German when Miller heard Rand entering the other room. Juan tried to hold him, but Miller had shot Juan and left him for dead. Juan had staggered to his feet, followed Miller and stabbed him in the back while Miller was lying in ambush for Rand.

Rand returned to the lounge, picked Juan up tenderly and carried him up the hill behind the house. He hid Juan's body in the underbrush. The stone tablet must be taken care of. Juan's body would be taken to his family tomorrow. Tonight there was urgent business at hand.

HERMAN WASSLER, given a job that he thought he merited, drove

swiftly toward Uruapan. He, of course, knew nothing of Miller's death, although it is doubtful whether the knowledge would have bothered him. Miller had been domineering, and Wassler had his own ideas about handling Miller's job. Ideas that were born of a sadistic, murdering complex buried deep in Wassler's brain.

Wassler knew the layout of the Uruapan hotel perfectly. He had been called upon to dispose of minor officials much earlier in the campaign. Therefore he chose his headquarters swiftly.

At dawn he was well hidden in a small hallway across from Rand's room, rifle ready, keen eyes watching the drawn shade from a small window. He consulted his watch. He had been here for two hours.

Seven-fifteen. It was cloudy and dark. A light came on in Rand's room. Wassler raised his rifle, made sure the barrel didn't protrude beyond his own window, and waited. A shadow passed behind the shade. Wassler tensed and the shadow moved on.

Rifle ready, he saw the shadow return and stand there behind the shade. Without a qualm, Wassler sighted quickly and fired. As he did so, the curtain flopped up.

He saw a girl, robed in blue, clutch her throat and fall forward against the glass.

Wassler cursed. In his stupidity, he had chosen the wrong room. A perfectly logical mistake, but he had shot someone whom he was deeply interested in—Frances Frazer.

JIM RAND didn't waste the time necessary to return to the Uruapan hotel. It was still long before daylight when he left Ernst Miller's home.

Juan's death disturbed Rand greatly. He had grown to love the Mexican boy like a brother. Now it was too

late to help him, but, if the plan worked out, Juan's death would be instrumental in saving millions of his countrymen.

Rand found Miller's plane at the field. With a little talk, he convinced the man in charge that Miller had given permission for him to use it.

Rand flew directly to Mexico City. Within an hour of his arrival, the possession of the stone brought him an audience with Mexico's President. Several important men were present at that meeting. Feeling very much out of place, Rand told his story from beginning to end. He explained that his only clue had been the name Parangaricutiro, written in Aztec close to the bottom of the crumbling stone.

He left out nothing of his story, telling of the death of Ernst Miller and how Miller, a German spy, had already prepared landing strips and ammunition dumps in the jungle.

His audience, destined to protect Mexico through a great war, listened patiently.

To his surprise, he was escorted to the biggest news agency in the city where he made arrangements to have a photo of the stone sent to Frazer's friend at the U. of C. Then with an escort of a dozen Army men, and with the best wishes of the President himself, he returned to Uruapan.

The shock of seeing Frances Frazer, slim and pale as a ghost, brought back Rand's hatred for Wassler with sudden clarity. Three doctors were watching Frances every moment of the day. She had an even chance to live.

WHAT happened among the people of Mexico and the United States in the following two days, is now history. Herman Wassler disappeared entirely, hiding with his men in the jungle. The University of California published a complete report of the Aztec

stone, vouching for the authenticity and stating, from their viewpoint, that the story of the *Black Comet* was entirely accurate.

The President of the United States personally appointed a strong force of Army men to fly to Parangaricutiro, Mexico.

He also gave out press notices, asking that the people remain cool and prevent the spread of propaganda that might comfort Axis nations.

Just what harm the *Black Comet* would do was a question. All observatories gave their complete time to mapping its course. By Thursday afternoon, a vast portion of the night sky was plotted out. The *Black Comet* was close. At least, close in the eyes of astronomers who allowed for its terrific speed and size.

Headquarters were set up in the ancient town of Parangaricutiro. Army men, equipment of all types, and a large house, were all placed at the disposal of Professor Frazer.

Then the world waited.

If the *Black Comet* hit Mexico City the city would be completely destroyed. Thus read the account of the Aztecs. Hence mass movement of all the people in this city took place. Planes carried evacuees to supposed safety hundreds of miles away. The President moved his headquarters to Uruapan, where he might watch with his own eyes what took place. Mexico and the United States waited for the worst.

DURING those days, Professor Frazer and Jim Rand were not idle. On Wednesday, Frances was left in safe care at Uruapan. Rand and Frazer made the quick trip to Parangaricutiro in an army jeep.

Rand set out alone to explore the countryside. He had kept to himself since Juan's death. By finding the

riddle of the Aztecs, he could make the boy's death a tragedy not in vain.

This afternoon, Rand met Frazer high in the hills near the town. Below, they could see the army of tents; men with all manner of military equipment, waiting to fight something they knew nothing about.

Rand leaned against a tree on the mountain side.

"You'd think, with the armies both nations have drawn up, that this was to be a military campaign."

Frazer shook his head.

"Rand, we've got exactly two days to prevent a collision between the world and a force that may destroy part of it. I've reached a dead end. What are we to do?"

Rand considered.

"This town was mentioned for a purpose," he said at last. "The Aztecs said they had made preparations to prevent the collision. The stone was so badly broken that we don't know what they did. I've been looking for some sign of a man-made object."

Frazer stared at the sky, then let his gaze wander down to the round top of the mountain above him.

"I haven't been to the top yet," he admitted. "We'd better have at least one look."

Together they started upward. After a hour's climb, they came out on the smooth flat top of the mountain. It was rounded so that the highest spot was curved somewhat in the manner of a stone cannon ball.

Frazer made his way across the smooth boulder until he stood on the highest point.

"Odd," he said at last. "But I've been led to believe that this mountain was of volcanic structure. I expected to find a crater up here." Rand had been walking about over the smooth stone. He bent over suddenly, study-

ing the surface.

"Frazer." His voice was taut with excitement. "Come here."

Frazer ran to his side. Rand was pointing to a row of holes drilled into the surface of the stone.

They were formed in the shape of an arrow, pointing down the face of the mountain toward the south.

"Mexico City," Frazer said. "Pointing to the city."

Rand nodded.

"Professor, I'm going to hazard a guess. It isn't much, and I have only a hunch to go on. Try to hear me through without laughing."

Frazer shook his head.

"I'm far from a humorous mood," he admitted.

"You said this mountain seemed volcanic in origin," Rand said. "That started me thinking."

"Yes?"

"Professor, suppose this bullet-shaped boulder was placed into the crater by human hands. Perhaps moved here in sections and welded together by some substance that the Aztecs knew of?"

Frazer went to his knees, studying the surface of the rock.

"Suppose that the Aztecs *did* make arrangements to stop that comet. Only one way was possible. To fire a projectile into space like a gigantic cannon, and hit the comet before it reached earth."

"But—" Frazer started to protest.

"I know," Rand admitted. "Wild—absolutely impossible; and yet the Aztecs built temples with boulders larger than we've ever found a way to move by hand. Isn't it possible to assume that, saying they did plan a way to stop the *Black Comet*, they might have equipped this mountain with a huge stone cannonball, primed a mechanism to set it off at the precise moment, and

waited, confident that they would be able to save their precious city from destruction."

Frazer's eyes were almost closed. Within his mind were many thoughts. True, the top of the mountain had been altered. He was sure of that.

"One thing troubles me," he said at last. "The mechanism? If they did all this, where is the mechanism?"

Rand grimaced.

"I may be called an awful fool for this wild hunch, but where a better place than in the base of the mountain itself?"

"And if we are to find it?"

Rand pointed to the arrow drilled in the rock.

"Mexico City is south, Frazer," he said slowly. "But not in direct line with this arrow. I suggest we get surveying instruments, a dozen men and start following a dead line from the pointer end of that arrow."

AT MIDNIGHT Waldo Frazer and Jim Rand found the object of their search. With a dozen Army photographers and surveyors, they traveled the smooth rock cap, plotted its surface and came to the conclusion that it was man-made. The volcano itself, however, was long dead. This meant that the Aztecs had planned on some other power to send the cannon-rock shooting into space.

For hours they followed the course of the arrow, down the side of the mountain and into the dense underbrush at its base. Huge army caterpillar tractors ripped their snouts into soft earth, digging away the trees and heavy vines that had long since covered Aztec civilization. Electric generators were brought up by plane from Mexico City, and power lines were strung for miles near the bottom of the cliff. Under the direction of Waldo Frazer, trenches

were dug in an attempt to find some trace of an Aztec tunnel.

When the solution came, it was so simple that Rand swore at himself for not thinking of it sooner.

At the base of the cliff, down in the valley where dirt trucks and tractors roared a steady fight against time, he found another arrow. It was small, not more than a foot long, pointing away to the north. Rather than start the entire staff on another wild goose chase, he followed the second arrow and found the third.

The Aztecs had been clever. They had placed several arrows in different places. None of them made sense individually, but by starting with the first, the trail was easy. It ended flat against the turf that had grown up to the bottom of a small, lower cliff.

So tired that he was almost beyond satisfaction, Rand staggered back through the wilderness and told Frazer. In half an hour a wide ditch had been gouged away and a slab of rock uncovered. The slab, pulled from the opening by the combined force of three tractors, left a low, clean tunnel open under the cliff.

All but the most important officials were sent back to the main camp at once. Reporters, waiting for long hours for this news, were ready now to dispatch word of Jim Rand's latest discovery to the waiting world.

Only one press representative was allowed to go with the carefully chosen party into the heart of the mountain. Jim Rand, Frazer, Manuel Fresno of the President's cabinet, and dour-faced Ralph Hawk of the *Washington News* prepared to enter the crypt.

A RADIO had been set up at the entrance of the tunnel. Two signal corps men were at the controls. A phone wire led into the tunnel.

Down below, Frazer, Rand and their two friends moved ahead cautiously toward the cavity they felt sure existed in the heart of the rock.

"Almost half a mile," Frazer said suddenly. "The distance proves we are nearly under the stone bullet."

"If this turns out to be an old tomb instead of a powder chamber," Rand said, "we'd might as well stay here ourselves."

Hawk of the *Washington News* suddenly gave a cry of surprise.

"Ahead there," he said. "Looks like an open cave."

It was. A small, compact cavern with square walls and a hodge-podge of equipment piled in the center.

The place had a wrecked appearance that puzzled them. They entered the chamber and Rand put the lantern on the floor. Above them a straight shaft, not more than six inches wide, went straight upward to daylight.

The apparatus that met their eyes was constructed mostly of rusted metal and rock discs. Frazer tried for several minutes to make sense out of it, then gave up.

"Someone has beat us here," he said. "This isn't like the Aztecs at all. I'll venture that this intricate system of balance and counter balance was made to get the charge off at the exact moment."

"There on the floor"—he pointed to a squared stone with numerous markings on it—"is the remains of a calendar stone. It's evident that someone or something has broken it in two pieces. Would a race of people, determined to save their own skins, deliberately wreck their plan?"

Rand didn't answer. He had found rude markings on the wall. They were in Spanish, cut with a sharp-pointed instrument.

"The lantern," he said. "Bring it

here. Perhaps Manuel Fresno can make something of this."

The little Mexican started to read to himself. Then he turned, his face twisted in anger.

"Cortez," he said bitterly. "The message says: 'I, Hernando Cortez, have with great trouble found my way into the heart of this mountain. The Aztecs have led me to believe it was a gold mine and tried to trap me here. In retaliation, I have chosen to destroy their religious trappings, useless stones. May this teach a lesson to the sons of the Aztec.'"

"Damn meddling hypocrite," Frazer mumbled. "Now I've got to start at the bottom and work this thing out myself."

Hawk produced a cheap watch and consulted it.

"In exactly twenty hours, five minutes and six seconds, Mexico City is scheduled to get blown off the map. If this place is really filled with powder enough to explode the top of the mountain, I'm getting back to the States."

Hawk had his story. He headed up the tunnel, walking with hunched shoulders to clear the roof.

Hawk had hardly left, and Frazer was leaning over the oddly marked calendar stone, when the explosion came.

The tunnel sucked down a quick intake of air and the lantern went out.

"Good God," Rand cried in a choked voice.

They could hear Hawk swear, and his footsteps as he found his way toward them. Manuel Fresno muttered something in Spanish. Frazer, the phone in his hand, tried to reach the men at the face of the tunnel.

"Frazer calling— Hey! What the hell——?"

Then Hawk, swearing bloody murder.

"I shouldn't have come in with you

guys in the first place. Whole damned tunnel caved in up there."

Then a voice, clear and sharp over the phone. So clear that Rand could hear it, and his fists clenched tight.

"Jim Rand." It was Wassler's voice, cool and sharp. "You thought you could outwit us. The signal corps men are dead. You will have no visitors for at least an hour. When they come, it will take too long to dig you out. Good-bye, and remember that you did me at least one favor. Now I alone am the leader here."

FRAZER started to speak again, and felt the wire go dead.

"Guess the wire has been severed." He tossed the phone on the floor. "How are we coming, Rand?"

Rand looked up from his place on the cave floor. His shirt was open, glasses steamed until he could hardly see through them.

"We were damned lucky you found that powder chamber," he said. "I've packed this small box half full of it and the fuse is ready. Here's hoping you doped it out right. We might have enough to blow us all to kingdom come."

Frazer smiled.

"I think not," he said. "The main chamber is about a hundred feet across. It's packed tight. If that chamber held powder for the general charge, this small amount should do the job at hand without much danger to ourselves."*

*In explanation to the reader, let us say that Waldo Frazer discovered that the powder charge under the stone-capped mountain was prepared much as a modern bullet is manufactured. The stone cap took the place of the actual lead slug in a rifle bullet. The mountain crater itself acted as the cartridge shell. Of course, a primer was out of the question. The intricate machinery, destroyed by Cortes, took the place of the primer. Because it was destroyed, the task of rebuilding this machine and timing it to the second, fell to the genius of Professor Frazer.—Ed.

He took the box from Rand, tamped a fuse into the top of the box and together they started up the blocked tunnel.

No sound came to them from outside. "I hope they're out of the way," Frazer said.

He placed the box carefully under a projecting rock where the tunnel roof had fallen in, and adjusted the fuse.

The tunnel was stifling. The air was becoming foul in spite of the air vent.

From below them, Ralph Hawk shouted something about making it snappy. Frazer listened. There was no sound outside now. He leaned over, stretched the fuse out to full length and applied a match. The fuse started to sputter. "Run for it," he shouted.

Together, they dashed down the tunnel. Ralph Hawk and Manuel Fresno were already crouched against the side wall of the cave. Rand reached the cave, then turned to see Frazer stumble and fall just inside the tunnel entrance.

BAROOM!

Before Rand could return to aid his friend, the cave shook under the force of the explosion. Frazer, not badly hurt, crouched close to the floor. Then all was silent, save for the sound of falling rocks.

"You're all right?" Rand shouted.

FRAZER climbed to his feet unsteadily. There was an odd look of terror on his face. He held his hands over his eyes, and then slapped his cheeks smartly with the palms of his hands.

Fresno came from the corner.

"One big explosion," he said. "I'm glad it didn't start the main powder chamber toward heaven."

Rand knew there was something wrong with Frazer. Yet the man hadn't taken a bad fall. He had no visible wounds.

Meanwhile, Hawk had rushed up the tunnel. He was back, breathless with excitement.

"By God, boys," he howled, "she's through. I can see daylight. Rand, you going for that equipment? I'll fly to the States with you, get my story in and come back."

Rand didn't answer. Gradually the rest of them noticed Waldo Frazer. He was staggering, both hands before him, as though feeling for the side of the cave.

"Frazer!" Rand said sharply. "What the hell?"

Waldo Frazer turned toward his voice, eyes wide open, a dazed expression on his face.

"I—I can't see," he said haltingly.

Hawk's breath sucked in loudly. Rand was across the cave, both hands on Frazer's shoulder.

"Waldo—take it easy, man. You're going to be all right."

Frazer's hands gripped Rand's arms. He held on tightly.

"Rock dust," he said. "Sorry, but I'm afraid it's a bad job. I won't do any more star gazing."

Manuel Fresno became excited.

"But the Black Comet, señor. You're the only man who can save——"

Rand whirled on the Mexican.

"Shut your damned mouth," he said. "Can't you see what's happened?"

Frazer managed a wan smile.

"No quarreling, please," he begged. "Least of all over me. I'm all right. Rand, take a list of materials from me and get the hell out of here. You'll have to be back in a few hours."

Rand found his note book and started to copy down the items as Frazer rattled them off.

Before he was finished, sounds in the tunnel told him that the others were on their way down. He listened to Frazer's mechanical, bitter voice.

"Winch—a small one, fifty feet of rope, half a dozen alarm clocks . . ."

Then it was finished and Frances Frazer's voice came excitedly in the tunnel.

"Jim," Frazer said quietly.

"Yes," Rand said. "You'd rather Frances didn't know?"

Frazer nodded.

"You and Hawk leave at once and make all speed possible. Manuel will help me out of here and keep the others from finding out if he can. We've got a job to do, Jim."

Rand swallowed.

"No sentiment, sir," he promised.

"But, please take it easy."

Frazer's lips pressed together in a hard line.

"No sentiment, boy," he said. "But you're going to have to be the eyes of our partnership for the next few hours. I think we'll make it."

They shook hands quickly.

ON MARCH 11, the following bulletin was issued from Yerkes Observatory to both Presidents, and to astronomers throughout the country.

The BLACK COMET is definitely going to hit Earth. Through several days of close observation, it has been determined that at its present rate of speed, this comet cannot avoid striking after daylight tomorrow morning. The world is waiting and putting trust in one of our foremost scientists, Professor Waldo Frazer. Frazer is at the scene of what may be a great catastrophe unless he and his aids can prevent it. We ask all of you to co-operate with him by sending radio reports of any new findings.

During those last few hours, a lone B-17 bomber winged its way southward toward Uruapan. On board were two passengers. Jim Rand, busy sorting

and preparing gadgets from which the time fuse would be constructed, and lanky Walter Hawk.

They had been across the border for some hours. The jungle country of southern Mexico was beginning to un-reel swiftly under the wings. Rand, finally finished with what work he could do, turned to Hawk.

"When this thing is over," he said grimly, "I'll give you the line up on the fifth columnists who almost buried us for keeps in the cave. There's a fine story in it for you, and the government can clean them out quite easily."

Hawk, already familiar with Herman Wassler's voice, showed great interest.

"I understand your Mexican boy put one of them away? Guy by the name of Miller?"

Rand nodded, and went on, telling Hawk what he knew.

Hawk interrupted finally.

"Miller was well known in Washington. Been causing trouble for years. Skipped out after we caught up with the Nazi Bund camps. Had a thin, mousy partner named Kessler. Suppose that might be Wassler?"

Rand brought his fist down suddenly on top of a cargo crate.

"Wassler or Kessler," he said. "He's responsible for almost killing Frances and because he destroyed the tunnel, Frazer's blind. Wassler and I have an account to settle."

One of the pilots turned suddenly, a strained expression on his face.

"If I'm not nuts, that's as pretty an airfield as I've ever seen, just ahead there buried in the jungle. It's not down on the map."

Rand leaned forward eagerly, staring down at the long, smooth run-way cut out of virgin wilderness. A line of lights went around the entire field.

"That's it," he said sharply. "I knew they had one hidden up here somewhere.

Are we near Uruapan?"

The co-pilot nodded.

"Leveling off to go in in about ten minutes," he said. "But say, that field's plain as the nose on your face. You'd think they'd have it hidden."

A thought flashed through Rand's mind. It wasn't a pleasant one.

"Suppose Wassler had it camouflaged, and took the camouflage away so that they could get planes into the air?"

He heard Hawk gasp.

"He wouldn't know we were coming down by plane."

Rand stood up.

"Just the same, he knew we were in the tunnel. I wouldn't be——"

Crack!

The bomber tottered suddenly, leveled, then shuddered from nose to tail. Rand was aware of the two pilots grasping hurriedly at the controls, then the force of the blow sent him spinning into the equipment and the bomber nosed downward toward the jungle.

"You're right," one of the pilots shouted. "Plane on our tail—blind spot—no gunner along. He must have socked some heavy stuff into the wing—it's folding."

Rand regained his balance just in time to see a fighter plane, no marks on its wings, shoot ahead of them and upward into the sky.

"Sit tight back there," the co-pilot howled. "Going to try a tree-top landing. Think we can make it."

Hawk sat still, knuckles white as he grasped the side of the plane and held on. Rand tried to see the plane above them, but he was thrown on his side as the B-17 started to dive.

A single row of machine gun bullets ripped through the top of the cabin and buried themselves in the floor.

"Almost down," he heard a voice shout. "Hold on and pray, if you got a——"

Then the sudden ripping, slapping sound as they topped the first trees. The props went with a crash and the engines roared suddenly and died. Rand was tossed about in the cabin, felt his back strike against a packing case. Then everything blacked out. He was conscious only of a slipping, sliding feeling as the plane stopped moving ahead and slid down among the trees.

WALDO FRAZER had done a fine job, Rand thought, as they carried him down the steep incline of the tunnel. Mexican peons had seen the B-17 crash. A quick rescue was made, and none of the occupants was dead. Hawk had a nasty gouge over his left eye and Rand knew he himself wouldn't be walking for several days.

His back and legs had suffered a severe wrenching, although no bones were broken.

When Frazer heard the precious instruments were destroyed, he replanned everything alone, in a darkened, sightless brain.

He insisted that he and Rand be taken into the cave room. Because Rand could not walk, he was carried down on a stretcher and placed comfortably in a dry corner. A small box of reports and books were brought also, at Frazer's bidding. Manuel Fresno, still at Frazer's side, helped the professor manage the trip in a way that hid his secret perfectly. Even Frances did not suspect that her father could not see.

Now they were alone under the mountain, a man who could not see and another who had no power to move. Frazer was silent for a long time, making sure that everyone had returned to the head of the tunnel.

"Jim," he said suddenly. "You and I have three hours to work. I've another way out. I thought of it when

you were gone. I know the equipment down here by heart. It might be repaired."

Jim Rand looked at the broken mechanism that Cortez had destroyed hundreds of years before. He knew what was in Frazer's mind. He didn't have the heart to argue with him.

"You're in bad shape for such work," he protested mildly. "Think you can manage?"

Frazer nodded grimly.

"You're going to have to read to me," he said, and sat down on the sandy floor. "I'll have to hear every report that has been issued in the past twenty hours."

Rand went to work, keeping his voice as steady as possible, reading the observations that had come in from all parts of the country. Outside the tunnel, a number of high officials stood by, radio ready, receiving each new flash that came across the jungle from civilization.

Frances Frazer, without understanding what was taking place, knew only that the pain in her shoulder had long since ceased, and there was only a dull yearning inside her to be with the two men under the mountain.

"**SO NOW**," Frazer said finally. "The time is so close I suggest that you call the others and get to safety."

Rand, knowing from the first that this would happen, hated worse than anything else to face the actual parting.

"You—can think of no other way?"

Waldo Frazer had aged greatly in the past half day. His sightless eyes stared straight ahead. His lips were compressed, fists clenched.

"If you had lived a full fifty years, able to scrutinize the sky with sharp, all-seeing eyes, loving every hour of your work, would you want to go on without seeing—without knowing what

was there to see?"

Rand was silent.

"Some might call me a hero," Frazer pondered slowly. "Perhaps I am more of a coward than a hero. I can't stand facing the facts as they are. If one poor life can save thousands, it should be that way. What other form of primer do we have? A single match, quick death at a precise instant, and the Black Meteor will be faced with something more powerful than it can endure."

Rand tried to roll closer to the older man, and grimaced at the pain.

"I think you know how I feel?"

"We've been friends," Frazer said simply. "You found this mountain cannon of ours, and I'm to have the honor of firing it. I know you'll take care of Frances, and that's all I ask."

"Then I'd better go," Rand said. "I've removed the glass from my watch and I've scratched a spot on the dial precisely where our final measurement figured out. That will be the exact instant where the exploding projectile will have a chance of meeting the *Black Comet*. After that it will be too late. A shot would be useless."

Frazer nodded.

"I know," he said. "Give me the watch and call the men."

Leaning over, Rand pressed the switch and spoke into the phone.

"We're all set," he said in an easy voice. "Bring down the stretcher."

THE final death agonies of the mountains were swift and glorious. Every army unit, every single living person within ten miles of Parangaricutiro was removed to safety. Only Rand knew what Frazer planned to do. The others, practical men, depended on Frazer to produce a long-distance firing apparatus.

Rand and Frazer knew it couldn't

be done. That to fire at the precise second, necessary if the plan were to work, depended on perfect timing. No timing was more flawless than the grim, shaking fingers of an old man, applying a lighted match directly under the vast powder room.

From Uruapan, Frances Frazer, her arm tightly about Rand, watched and waited for the clock to tick the fatal second. Army men strained their eyes in the direction of the round top mountain.

Five minutes . . .

Frances started to cry softly, dried her tears and pressed closer to Rand.

"He wanted it this way?" she asked.

Rand nodded.

"He's a great man," he said.

The last minute, and the last second, and Rand held his breath.

B-A-R-O-O-O-M-M

The air was split with a mighty roar, and the entire top of the mountain exploded into the air. Jungle trees bent double under the force and the ground shook as though ripped by an earthquake. Smoke and fire belched hundreds of yards into the sky. Then the mountain itself settled back slowly, seemed to tip tiredly over on one side and was motionless. It had sunk into the earth at least fifty yards lower than it had been before.

Its entire contour was changed and flattened by the blow.

Gradually, Rand was aware of excited voices about him. Across town at the airport, half a dozen planes took to the air and turned north. Trucks and jeeps started to pull out.

He heard an announcer, on the scene for the Northern Networks, talking over the microphone.

". . . entire world seemed to come to an end," the man was saying. "This was a deliberate man-made attempt to destroy part of an onrushing force that

may kill millions . . . hero among heroes . . . Professor Waldo Frazer personally handled the job . . . hope to hear from the Professor in an hour or two . . . party already on way to mountain to interview . . ."

With a sob, Frances was in Jim Rand's arms.

"Oh! The fools. The poor fools. Dad killed himself for them and they don't even know it."

"They will," Rand said thickly. "And they'll never forget the blind man who gave his life so that millions might live."

March 13. From Yerkes Observatory. It was reported here this afternoon that Professor Waldo Frazer's death was not in vain. His calculation, figured with the eyes of James Rand, was a wonderful thing. How any blind man, blinded completely, could time the shot to the split second is beyond understanding. But it is true. The entire story has been learned from Rand.

Today a fitting end is recorded. Seven observers, all working with this observatory, reported that the BLACK COMET seemed to come to an abrupt halt within three hours after the projectile was fired. It hesitated in space, then seemed

to explode with a radiant burst of color. Tonight the sky is clear once more. Professor Waldo Frazer's work is well known. His name is dedicated to the ages . . ."

From the WASHINGTON NEWS, March 14—Special from Walter Hawk—Uruapan, Mexico. Combined forces of Mexican and United States Army planes flew over the jungle here today. With the assistance of this reporter, a hidden Axis airport was discovered and completely destroyed. Ground forces used commando tactics to round up several fifth column suspects. Herman Wassler, otherwise known as Kessler, faced the firing squad for his leadership of this group.

WASHINGTON NEWS, March 16—Special from Walter Hawk—San Diego, California. This reporter returned to the States today with James Rand, Professor Waldo Frazer's able assistant and original discoverer of the BLACK COMET menace. Rand and Miss Frances Frazer, although they refuse to discuss dates, will probably be married some time this summer. Rand will continue . . .

THE END

THE DEATHLESS PARAMECIUM!

FOR over 36 years a race of the microscopic paramecium or slipper-animalcule has been reproducing under the watchful eyes of biologists at Yale University. In this time well over 20,000 generations of offspring have been produced and yet the original animal continues to live.

The race has been named the Woodruff race in honor of Professor Loande Less Woodruff, who started it. The paramecium reproduces, without a sex process, by simply splitting in two. Then the two parts grow to maturity and in turn split into two again. These individuals live

forever, unless destroyed, and continue to divide and multiply.

Practically all of the descendants—or shall we say parts of the original paramecium—have been destroyed because it would have been impossible to feed them all. Moreover, if they had been fed and permitted to live, within five years of the first splitting the entire earth and all known space would have been inundated beneath a great mass of paramecia.

Today the Woodruff race continues to reproduce and one wonders if anyone knows exactly which paramecium started it all.—Pete Bogg.

The Lying



The lie detector was flashing both lights frantically, signalling an untruth! The detector was lying!

Lie-Detector

By LEROY YERXA

**HERE was mechanical justice!
Decisions handed down by a
machine that could not lie!**

RAYMOND SAND drew a crumpled cigar wrapper from his coat pocket and twisted it idly between the fingers of one hand. After a long moment's thought, he pressed the button on his desk that summoned Miss Salmon, and waited until her thin, depressing face appeared in the doorway.

"Get in touch with 'Parrot' French," he said. "I want to talk to him as soon as possible."

Miss Salmon grimaced.

"You choose the nicest people for your friends," she said.

Sand grinned and picked up the phone and dialed a number. There was a moment's hesitation before Sue Fletcher came on at the other end of the wire and said:

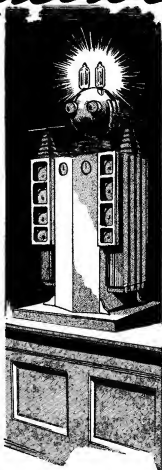
"Hello. Fletcher's residence."

"This is Raymond Sand calling," he said.

"Oh, yes, Mr. Sand. I'm sorry, but I'm still not interested in hiring a private detective."

"Wait a minute," he begged, afraid that she might hang up. "You don't understand. I know your brother is innocent. I'm not after your money. This is a personal affair with me."

"I'm sorry," the girl replied in a tone that clearly indicated that she was not



sorry at all. "I'm not going to waste any more time discussing it."

Sand sighed.

"I can't force my services upon an unwilling client," he confessed.

Evidently she agreed, for the phone clicked loudly in his ear before he could hang up.

Miss Salmon broke the connection on the switchboard and hurried into Sand's office.

"You're a sucker," she said bitterly. "Making a fool of yourself over a pretty girl."

Sand sat quietly for some time. After a while, the phone jangled.

Sand reached for the receiver.

"Raymond Sand speaking."

"Hey, Sand," a whining voice greeted him, "this is Parrot French. Your secretary left word for me to get in touch with you."

Sand glanced at his wrist-watch.

"Which you did promptly," he said.

"I have some questions to ask. You find the answers."

French's voice sounded suddenly angry.

"Look here, Sand, I ain't no stool. I don't like doing this kind of work for you."

Sand frowned, holding the receiver away from his ear.

"You forget favors easily, don't you, Parrot? How about that murder rap I cleared you on last month?"

French's voice died down again to a pleading whine.

"Okay, okay; so I know you're a good scout. All the boys know it. So, what's the job this time?"

"Get a scent on Ely Green, the banker. Dig up all the dirt you can on him. Find out how long he's known Jerald Warner, and where he was when Sam Fletcher rubbed Warner out."

He heard French whistle.

"Is *that* all?" French asked. "A rich

guy is rubbed out and the case is so hot it burns the D. A.'s fingers, so you want me to get my fingers in it. Lay off, will you?"

Sand said quietly, "I want to know where Ely Green was between eight and eight-thirty the night Warner was killed. You find out."

He hung up, and his lips were no longer smiling. He hoped some day to get out of the habit of using rats like French. But, for the time being, French was a better watch-dog than all the cops at headquarters.

RAY SAND removed his hat and extended his hand to the slim, auburn-haired girl who had just entered Inspector Case's office. Case said:

"This is Raymond Sand, a private operator who's been very interested in your brother's case. He has evidence which he believes will clear him. Perhaps you'd like to stay here and hear his story?"

Sue Fletcher accepted Sand's hand.

"I'm pleased to meet you, Miss Fletcher," Sand said. "I'm very much interested in your brother's case. I believe the information I have will clear him."

Several hours had passed since a jury had refused to decide on Sam Fletcher's innocence or guilt. A lie-detector test had been called for. Sue Fletcher wasn't quite sure now about her brother's chances of leaving the court a free man.

Case said:

"You two sit down. We might as well go over this thing together."

"I guess I haven't been very kind to you over the phone," Sue Fletcher told Sand. "I've been very worried about Sam. I'm the only one he can depend on. I'm very grateful for your interest."

Sand chose a chair near the one Case

had placed for the girl.

"Don't be grateful to me," he said. "I suspect a man of the murder whom I hate very cordially. I took a chance and went ahead with the investigation in spite of your refusal to retain me."

Deep color flushed the girl's cheeks. He saw her shoulders straighten as though a huge load had been taken from them. She appealed to Case.

"The detector will free Sam, won't it?" she asked. "If, as Mr. Sand claims, the murderer is still at large, surely everything will turn out all right."

James Case rubbed the stubble on his chin thoughtfully. He turned to Sand and said:

"Tell her what you found out."

SAND leaned back in his chair. He stared into the girl's eyes as he talked, but his mind wasn't on her. He was thinking back to that interview with Parrot French.

"Ely Green, a very well known banker down-town, has been friendly with Warner for many years. I've got a lot of stuff on Green. When this case broke, I happened to know that Green and Warner had just had a fight. I couldn't believe your brother had actually shot Warner. I put a man on the case and he brought in evidence that proved beyond doubt that Sam couldn't have been present at the time Warner died."

Case coughed discreetly.

"I wouldn't take too much stock in what Sand says," he cautioned the girl. "Unfortunately, although Sand means very well in this case, his source of information isn't very reliable."

Sand flushed faintly but didn't protest. He said:

"On the night of Warner's death, it has been established that your brother left the Warner residence at eight o'clock. Slade Jarvis, the general

handy-man and chauffeur at the Warner residence, saw Warner alive and standing in the door of his home at five after eight."

Case started to interrupt, but Sand waved him aside.

"Ely Green arrived at the Warner place at fifteen after eight, after Mrs. Warner had called the police and reported her husband's death. After Mrs. Warner had left the house on her way to police headquarters."

Sde Fletcher had both hands on the arm of her chair.

"Then Sam couldn't have——"

"Just a minute, Miss Fletcher," Case said. "This all sounds very much in favor of Sam. Unfortunately, Sand's course of information could never be introduced as evidence. Parrot French, the man who found out these facts, has been in prison on several charges, including fraud. Also, we would have to have a more reliable witness than the chauffeur as he too has a police record."

RAYMOND SAND had been silent, listening. Now he stood up slowly. He was very calm, but his eyes betrayed the anger that was behind them.

"I've never pulled a fast one on you before, Case."

Case scratched his chin and looked stubborn.

"Sam Fletcher is in a bad spot," he said. "I can understand why you'd rather see Green in his shoes. You don't like Green. Unfortunately, you haven't got evidence that we can introduce into court."

"But you can start a new investigation. You can throw the thing wide open. I'm positive——"

Case shook his head.

"The case is closed," he said. "Fletcher will get a fair chance to tell the truth when he goes on 'Detecto' trial. If he's innocent . . ."

Sue Fletcher smiled wanly.

"I'm still grateful, Mr. Sand, for what you tried to do. I'm only sorry that I didn't let you work for Sam before all this came to light. Mr. Case admits that more reliable witnesses might have been acceptable."

Sand moved across the room to the battered hat-rack. He removed his hat and placed it carefully on his head. He turned to Case and anger smouldered deep in his eyes.

"The law, Miss Fletcher, is a very stubborn thing," he said coldly. "Case would rather see an innocent man die than disturb his routine methods and become involved with something that might be too complicated for him to handle."

Case was on his feet, heavy cheeks blood-red, fists clenched.

"I ought to take a crack at you for that remark."

Sand smiled.

"You're considerably past your prime, Inspector," he said. "I wouldn't try it."

He turned abruptly and left the office.

Sue Fletcher watched him go out and sighed.

"Modern crime methods are wonderful, Inspector," she said a trifle sarcastically. "Sometimes I wonder if the courts of ten years ago were not more fair to a man on trial for his life. At least a *human* jury could pronounce the death sentence."

Case was still on his feet, staring after Sand.

"Detecto has never misjudged a case yet," he growled. "After all, this is 1950. We no longer depend on human juries in a case like this. A machine is not influenced by human weaknesses."

The girl tossed her auburn hair back from her face and stood up. She smiled, but not confidently.

"Sam never told a lie in his life," she said proudly. "He has nothing to fear from a mechanical jury."

SEVERAL men and women sat in the hot, dry court room. Their eyes were on the squat metal box that stood on a platform at one end of the room. The box was six feet high, divided into two sections, with a large base and a smaller, head-like top. On the "head," two red tubes burned brightly, glaring like angry, blood-shot eyes. A row of tubes emerged from the box in the shape of a wide mouth. These were sending off a faint, white glow. Heavy arm-like cables were connected to the electrical power supply. Two more cables emerged near the bottom of the box, climbed the legs of a steel chair and ended in clamps which fitted the prisoner's wrists.

Sam Fletcher came in with a uniformed officer. He sat down on the small chair. His face was white and he looked badly frightened. A slim, bald man adjusted the wrist clamps and attached them to Fletcher's arms. The red eyes on Detecto, the lie-detector, started to blink at the spectators. The tube mouth seemed to grimace as the tubes grew bright.

Sue Fletcher and her brother's lawyer sat in the front row. Beside her was Inspector Jim Case, and beyond Case was District Attorney Fred Mitchell. Raymond Sand sat alone at the far end of the row of seats. He held an unlighted Havana in his teeth while his fingers fumbled with the cellophane wrapper.

Inspector Case arose.

"Professor Judson has been authorized by this State to handle Detecto during all trials." He spoke mechanically, repeating words he had spoken many times as a matter of form. Then he sat down.

The district attorney was immediately on his feet. He was small and neatly dressed, and conscious of his own importance.

"The State authorizes me to handle this trial," he said curtly. "The verdict handed down by Detecto will be final."

The room was very quiet as he sat down. The prisoner was a slightly built, blond-headed boy, hardly over twenty-one. Perspiration stood out on his forehead and his hands clutched the arms of the chair tightly. This was the test he welcomed. He wondered how long it would be before it would all be over.

Professor Judson drew a lever down on the side of Detecto and turned to face the prisoner. He picked up a sheet of paper from the table and adjusted his glasses. His high-pitched voice said:

"Your name is Samuel Fletcher?"

"Yes, sir."

"You are on trial for the murder of one Jerald Warner?"

"Yes."

As each question was answered, the red "eye" lights winked green. The professor consulted his list of questions.

"According to evidence submitted, you entered Jerald Warner's home on the night of June sixth, shortly before eight o'clock. You fired a bullet from a .45 revolver into Warner's back, then made your escape. Is that true?"

Sam Fletcher's smile grew confident.

"Not one word of it," he snapped.

A murmur of excitement swept through the room. The professor cleared his throat.

"Please answer yes or no," he said.

"Questions must be——"

"Wait a minute!"

District Attorney Mitchell was on his feet, protesting. Fletcher's lawyer also arose, talking loudly. Sam Fletcher managed to turn half way around and

his face turned a pasty white.

THE red eyes on Detecto had remained red and were flickering wildly. Detecto was indicating that Sam Fletcher's final statement had been a lie!

"The prisoner has answered the question falsely," Mitchell cried. "The machine is signaling his guilt."

The only man who was not on his feet, now, was Raymond Sand. The detective sat at the end of the row, eyebrows raised questioningly, the cigar wrapper still wadded in his fingers.

"One moment, please," Professor Judson shouted. "The answer may have confused Detecto. The machine is accustomed to simple answers of 'yes' or 'no.' We will ask the prisoner to answer clearly with one of those two words."

Now Sam Fletcher wasn't sure of himself. He fidgeted in his chair. He stared wonderingly at his sister and saw her tears.

"Did you murder Jerald Warner?" Judson asked.

"No," Fletcher said quietly.

Detecto's lights continued to glow brightly crimson.

Fletcher turned again and saw the guilt signal on the face of Detecto. He stood up, arms held at his sides, by the heavy cables. His face was dark with anger.

"You're a bunch of vultures!" he shouted. "I said I didn't kill Jerry Warner and before God, I didn't. I don't care what your machine says!"

He sank down, the fight abruptly gone out of him. His eyes were closed and his body shook with emotion.

Professor Judson shrugged. He turned off the machine and faced the court.

"Detecto was inspected by State Control men just before this trial," he

said. "There is no chance that a mechanical error was made. Fifty cases have been tried on Detecto this year. All of them were faultlessly conducted."

District Attorney Mitchell appeared satisfied. Jim Case stared down the row of faces toward Raymond Sand. Sand's expression was that of a completely baffled man. A scowl was etched on his forehead. He did not look up. Sand couldn't face the tearful eyes of the girl who had placed her trust in him.

The district attorney said:

"These findings will be reported to the judge at ten o'clock tomorrow morning. The prisoner will be sentenced at that time."

Two policemen removed Fletcher from the chair. His face was streaked with tears. Raymond Sand arose and left the room before Sue Fletcher, her face contorted with misery and anger, could reach him.

"I'VE never pulled a fast one on you yet, Case," Sand said evenly. "Is there a chance in the world of getting the case before a human jury?"

Jim Case tossed his hat on Sand's desk and sat down heavily in a chair opposite the detective.

"None," he said, "unless you can change the laws of the State. Why don't you break down and admit you're wrong, Sand? That boy is guilty and we both have proof of it."

"I haven't," Sand said stubbornly. "We know the machine said he is guilty, but in anything mechanical there is chance for an error."

Case shook his head.

"I came here for two reasons," he said. "First, I want to know why you introduced that so-called 'evidence' of yours at the last minute."

Sand said: "The evidence is as good now as it was when I gave it to you. I intend to prove that. What's the sec-

ond reason?"

Case said: "Okay, Sand. You're smart and you've helped me a lot in the past. I'm not going to push you around. I could make it hot for you, bringing in that cock-and-bull story. I won't do it."

"Damned noble of you," Sand said.

Case ignored the remark.

"The second reason for this visit," he said, "was to deliver a message from Miss Fletcher. She talked with me after the Detecto trial. She says she hopes you face that machine yourself some day, and that you'll know what decision she wants handed down."

Sand's eyes narrowed slightly. He pushed back his desk chair.

"That's one more reason, Case, why I'm going to bring in your murderer if I have to tear that lie-detector apart wire by wire until I find out why it didn't acknowledge the truth."

Case stood up, retrieved his hat, and placed it carefully on his head. He started toward the door, then turned.

"You sure picked a bad one in asking French to collect the dope for you," he said.

"I think French is telling the truth," Sand said. "What's more, I've kept him busy since we had that rather unpleasant meeting at your office. If you've got the guts to see yourself torn apart by some real investigation work, stick around while I call French up here. Something has happened that I think even you will listen to."

Case hesitated, then swore softly and crossed the room to the far corner. He sat down abruptly and turned his eyes on the man behind the desk.

"Bring in your stool pigeon," he snapped. "No man can accuse me of holding up justice."

SAND hesitated a moment, then picked up the phone. He dialed

and waited. When he spoke over the phone, his lips were set in straight, determined lines.

"Tell Parrot French to get up to my office in ten minutes," he said.

He slammed the receiver back in its cradle, turned and opened the file behind him. He took out several neat files and placed them in a row on his desk. When Miss Salmon peeked in ten minutes later, Sand didn't even look up. She tip-toed out again, closing the door silently behind her.

She had just adjusted a sheet of paper in her typewriter when Parrot French came in looking like a hunted fox. She looked up and frowned.

"You wanted to see Mr. Sand?"

French let his shifty eyes wander around the office.

"He sent for me," he said in a low voice. "I guess you better tell him I'm out here waiting."

"Sit down." Velia Salmon motioned to a small, straight-back chair.

She went to the door of Sand's office and announced Parrot's presence. Sand's voice came from beyond the partly opened door, and it didn't sound very pleasant to French. He stood up and went in.

Parrot French looked nervously at the Inspector. Case stared at him for a moment as he would study a strange fish.

"Don't be afraid of me this time, French," he said. "For once I'm not after you. I'm here because Sand thinks you've suddenly become an honest man and a reliable witness."

French sat down.

"You got nothing on me," he said. "I got a right to work for Sand if he wants me to."

"It's a free country," Case said. "Only, there's no accounting for some people's taste."

"That's enough clever dialogue,"

Sand said suddenly. "I want you to repeat what you told me yesterday," he told French. "The Inspector is interested."

French wriggled uncomfortably under Case's scrutiny.

"It's like I said. Slade Jarvis works for Mr. Warner, or he did before the guy croaked. Slade says on the night Warner was rubbed out, he brought the car around at five after eight. He saw Warner standing in the hall when his wife drove away."

SAND said: "Case said Mrs. Warner called and told him her husband was shot at eight o'clock. She left the house and drove to police headquarters, because she didn't dare stay there alone. Her husband was supposed to be dead when she left."

"Slade wasn't lying," French insisted. "He took Mrs. Warner to Case's office and when he came back, the old guy was dead, like Mrs. Warner said."

"Then she reported her husband's death before he was shot," Sand observed thoughtfully. "Mrs. Warner left the house, knowing her husband would be dead when she got back. She cleared out to give the killer time to get in after she left. If Slade Jarvis hadn't seen Warner alive at eight-five, no one could dispute Mrs. Warner's story."

"Jarvis did see him though," French said eagerly. "He's been wise to Mrs. Warner for a long time. She's been running around with Ely Green."

"So have I," Sand said. "Go on."

"Well, I found a guy who runs a tavern just south of Warner's place. At eight-thirty, Ely Green drove up, went into this tavern and ordered a drink. He went to the rest-room and stayed in there for fifteen minutes. He was plenty shaky. He had a few drinks and they got him down. He started talking

to Bill Prater, the guy who owns the joint. The joint was deserted, and Green started talking pretty loud about not being bothered by Warner again.

"Prater was suspicious and he fed Green a lot of strong stuff. Then Green told him he'd rubbed Warner out and that he, Green, was going to have free sailing with Warner's wife from then on."

In his corner, Case chuckled.

"I suppose you will swear to all this in court, and produce plenty of evidence, including *reliable* witnesses?"

Sand opened the drawer of his desk and took out a wrinkled paper towel. There were several small blood stains on it, molded perfectly into finger prints, where wet fingers had pressed into the paper. He placed the towel on the top of the desk.

"Prater found this towel in the wash-room after Green left," he said. "Green's fingerprints and Warner's blood."

French said eagerly: "I can get Slade Jarvis to talk. This kid Fletcher couldn't have rubbed the Warner guy out, because Slade says Fletcher left the house before Mrs. Warner did."

"You'll have to tell that to the State," Sand said.

French was puzzled.

"What's that mean in my language?"

"It means," Sand said slowly, "that Sam Fletcher is already in the death-house, waiting for the chair. Blind justice has been at work and Detecto condemned Fletcher to death only a few hours ago."

"Then that damned machine is a liar," French said excitedly. "So help me, Sand, I'm telling the truth. I been trying to help out. I ain't lying."

Sand stared at the man's pale face.

"Don't throw a fit," he said. "You did a good job. Now sit tight and keep your mouth shut."

CASE stood up. "This has been very touching," he said. "Now I'll tell you what I think. Jarvis and French have both served time. The tavern owner, Slater, hasn't got a very clear record. The court wouldn't sit still on these witnesses of yours. The case is settled and you can't dig it up again, regardless of how badly you hate Green. It just doesn't add up, Sand, not after any machine as reliable as Detecto has pronounced Fletcher guilty."

French sat very still, staring out the window. Sand arose.

"Okay, Case," he said slowly. "So that's the way it is. You're a stubborn, bull-headed fool and you can't absorb an intelligent explanation. You're afraid to dig up lost clues because the D. A. would be on your neck in the morning and you'd face a demotion if you failed to deliver the goods."

"Well, I'm not going to let it rest there. I'm going to put all this evidence in writing, take the depositions of all witnesses, put everything in an envelope and hand it to you. And if you refuse to do any more about it, I'll raise a stink you'll *never* live down."

Case didn't answer. He pulled his hat down hard on his head and walked to the door. He opened it, hesitated, looked back, then went out without a word, slamming the door behind him.

SAND found Inspector Case talking to a plainclothesman in the hall outside his office.

Case turned abruptly.

"Got something for me, Sand?"

Sand passed him the envelope.

"The evidence I told you about," he said.

"Wait a minute," Case said, and turned to dismiss the man he had been talking to. When he turned to Sand once more, his face was pink with impatience.

"I don't see the point of dragging this in," he said. "The boy can't be saved. Detecto has handed down the final decision."

"I know," Sand said stubbornly. "Case, we've been working together for a long time. If the police laboratory won't work on the blood stains and finger prints, I'll call on a private outfit. The results might hurt you boys."

Case grunted.

"You're forgetting Detecto," he said. "Sorry, Sand, but the damned machine *can't* lie. It *has* to be right."

Sand sighed. He had enough of the one-sided argument.

"All right," he agreed. "Make that test on the towels. Check the findings with the story I told you. Call French, Slade Jarvis, and Bill Prater, the owner of the tavern. Then, Case, just try to sleep after you've compared their stories. I don't think you'll rest well."

He turned and went back through the swinging doors into the waiting room. He reached the outside door, started to leave, thought better of it and went back down the long corridor, past Case's closed door to the rear of the building. Here was the court room that housed Detecto.

The door was locked, but Case knew the janitor. A five-dollar bill changed hands, and the private detective had the key. He let himself into the room silently, closed and locked the door behind him. He wasn't quite sure why he had come here. Something about the machine fascinated him. Something that filled him with disgust toward an instrument that could send human beings to the death house.

He sat down in the empty front row and crossed his legs, staring into the dead eyes of Detecto. The smooth metal body looked almost like that of a robot. He rose and switched on the power that fed the machine. The in-

stant that power surged through the machine, he felt as though he was being watched. Though at first it didn't trouble him a great deal, the feeling grew stronger. He knew that the door was locked tightly and that no one would be likely to find him here.

He sat down again, trying to throw off the feeling of being watched. Then, lighting his cigar, he laughed silently at his own fears. The room was full of the low hum of the machine. The sound made him drowsy. Detecto stared at him with red, baleful eyes.

"*You're a fool,*" a strange, grating voice said.

SAND started up, both feet hitting the floor, and the cigar dropped from his fingers. He stared around the room.

"Who was that?" His voice was sharp, bewildered.

"You're a fool," the voice repeated. "You can't win."

Sand said: "Where are you?"

"In the box," came the reply. "I'm the brain in the box."

It was a deep voice. The sound of it was metallic.

Sand gripped the sides of his chair. He stared at Detecto, struggling for words.

"You are a clever man, Sand, but after all, only a man." The voice was patient now, as though teaching a lesson. "You will grow old and run down. You will become useless. I will remain in perfect running order, and men will keep my parts clean and protected. Remember this: I talk to you only because I know you haven't the power to destroy me. Men have chosen me to dispense with uncertain, human justice. The fact that I can be even more unreliable than flesh and blood juries is something no one knows—except you."

Sand found himself talking now, as though another man sat opposite him.

It seemed the natural thing to do.

"But you can't continue condemning innocent men," he said.

"Nonsense," Detecto snapped. "Men are foolish, stupid things. They pretend to be wise and clever. I grow very tired of them. I have gradually perfected my own brain until I can make a lie become truth, or the truth become a lie. It entertains me to do these things.

"Justice, synthetic justice, is what I'm giving. Actually I have no voice. No one but you could hear me if there were others in the room. My brain is capable of sending thought waves in one direction. My thoughts are reaching your ear drums now, and you can 'hear' them. Others might think you were crazy, talking to yourself."

Talking to yourself!

Sand shuddered. Perhaps that was the explanation. The Fletcher case had been troubling him too much. Perhaps his own mind was talking.

He stood up, trying to look away from Detecto at the blank wall, then at the window, at anything to take his mind off that voice. Was he going mad?

"It's obvious that you doubt your own sanity," the voice said. "Let me convince you. Your name is Raymond Sand and you are trying to save a prisoner from death. This man appeared before me yesterday. You cannot save him. I have condemned him to die, and he *will* die."

Sand was moving cautiously toward the switch that controlled Detecto.

"Pull the switch and silence me," Detecto said. "But when I am turned on again, and that will be often, I will continue to work against man and his stupidity. Man is stupid in everything he does, and I will grow more powerful until I learn new ways to control him. Go ahead—pull the switch. It will make you feel safer."

Sand pulled it. The hum of power died

and the room was silent. He shrugged his shoulders, as though to toss away the feeling of fear that had crept into him. He stared at Detecto for several seconds, then went out of the room. He found the janitor and returned the key. In ten minutes he was on the street, still trying to convince himself that he had not talked to a machine. That the whole thing was a nightmare of his mind, created by the tragedy that had happened to Sam Fletcher.

SUE FLETCHER said coolly: "I'm sorry, Mr. Sand, but I don't care to see you again, even with dinner thrown in as the main attraction."

Sand winced, but the expression wasn't visible over the phone, and his voice was still friendly.

"I have one more chance to save your brother's life," he said urgently. "Surely you're interested in that."

He detected some hope in the moment's hesitation that came before she spoke again.

"I wish you *could* help," she said, "but you know as well as I do that when stupid justice is at work, you can't undo its laws, regardless of how unjust they are."

Sand sighed. He knew the truth of her words. It wasn't justice that was at fault. This time it was the fault of the instrument that justice had chosen to represent it.

"Will you do one thing for me?" he asked. "I'm going to see Green at two o'clock. I'm going to try to break him down. To get a confession."

The girl sighed.

"It can't help Sam, now," she said. "I'm afraid I can't see you—not feeling as I do now."

Sand said he was sorry and hung up.

He looked at his watch. It was a minute after twelve. He found his hat and went down for lunch.

AT ONE-THIRTY, Sand called Inspector Jim Case and held a long conversation with him. Case finally agreed to meet Sand at the Green Building at two o'clock.

Sand reached the Green Building at one fifty-five. He waited for some time. Case evidently wasn't going to arrive on time.

Green was an important man, financially, yet he occupied a small office at the end of the corridor on the fifth floor.

Sand took the elevator up, consulted his note book for the room number and found the right door. He knocked and the door slipped open under the force of his hand. He went in. A small reception room was lighted by a single bulb that hung over the switchboard. Evidently the receptionist was still out to lunch. The room was empty. Sand started to whistle softly. The sound aroused no one. He stepped softly through the small gate in a railing that cut the room into two sections. He crossed a frayed carpet to a door marked PRIVATE. He pushed the door open with his toe.

Two small, heavily draped windows faced an alley. Sunlight trickled between the blinds and made yard-stick designs on the floor. The desk with an old fashioned, green-shaded lamp on top of it, stood in one corner. The lamp was lighted.

The rest of the room housed several dusty file cabinets, a bookshelf lined with frayed books and a chair that had been tipped over so violently that the back had broken against the floor.

Green lay beside the chair, a thin, distinguished-looking man with some of his dignity disturbed by a long, bloody gash that ran along the right side of his neck, under the ear. Sand hadn't seen Ely Green for several years. He had grown much older, thinner. Green had evidently gone through some long

illness. His arms were outflung, with one hand grasping the telephone cord that ran down the side of the desk. He had tried, unsuccessfully, to drag the instrument from the desk.

Sand stood near the man, a queer light in his eyes. It was a light of hatred, long forgotten, but rekindled by recent events. He didn't kneel down. He didn't intend to leave any sign that he had been here.

A knock sounded on the outer door. He waited, studying the room for details that might prove valuable. Then he moved toward the door silently. There was only one way out. At the telephone switchboard, he waited. The knock came again, then the knob rattled and Jim Case walked in.

"Hello, Sand," he said in a surprised voice. "I'm sorry I was late. I knocked, but no one—"

He stopped speaking suddenly, staring past Sand at the open door of Green's office.

"Wait a minute," he said in a startled voice.

He was half way across the room before Sand snapped:

"Never mind the act, Case. I get it."

Case halted and swung around. "That's Green's body in there. Is he dead?"

Sand grimaced.

"I called you half an hour ago," he said. "Now I begin to see why you were late. It's a frame, Case, and you know damned well it is. I got here just ahead of you, the way it was meant to be."

Case stood there, his face turning slowly a deep crimson.

"Damn you," he said, "I'm fed up with your cracks. I've been called everything from a blind idiot to a fool. Now you've killed Green because you couldn't get him any other way, and I'm supposed to know all about it, to have fixed a frame on you. You aren't

going to get away with it this time, Sand."

He drew a heavy service revolver from his pocket.

"Better put them up, Sand, and high." He came across the carpet softly, like a stalking cat. "Just in case," he added, and reached for his cuffs.

DISTRICT ATTORNEY FRED MITCHELL, stiff and as alert as a fighting cock, strode up and down the full length of the office, hands clasped behind his back, a cigarette between his thin lips. Case sat behind his desk, his eyes thoughtful. On the far side of the room, Raymond Sand sat alone, a sardonic smile on his lips as he watched the district attorney move about.

Mitchell stopped suddenly, and pointed a finger dramatically at Sand.

"You were in the room when Case arrived. Miss Fletcher didn't want to testify against you, but she was forced to admit that you threatened Green's life."

Sand said nothing.

"You hated Ely Green," Mitchell snapped. "You *did* threaten to get him, didn't you?"

"I did," Sand said.

"Suppose you tell us why," Mitchell said, using his best court-room voice.

"Because," Sand said, "he swindled a friend of mine out of ten grand a long time ago. This friend committed suicide because it was all the money he had in the world and he couldn't go on. I don't forget things like that."

Mitchell wasn't even listening.

"You're a smart man, Sand," he said. "But I've got you in a tight spot, and this time you're not walking out of it. I'd stake my reputation that you killed Ely Green. You thought you could walk out of his office without being suspected. There was no one else who

might have wanted him out of the way."

Sand arose suddenly. He looked straight at Jim Case.

"Ask Case what happened," he said. "I gave him plenty of evidence to free Sam Fletcher. Case is afraid of me. He wants me out of the way. He had plenty of time to kill Green and frame me between one-thirty and two o'clock. I didn't think Jim would go that far, but there is no other explanation."

Mitchell laughed.

"You're smooth, Sand," he said. "Smooth as they come. But this time you can't get away with it. You're going to pay the penalty for getting rid of Green."

Sand came to his feet slowly, stretching like a cat.

"Then you're both in the same boat," he said. "You both know that the machine is fixed and you're getting rid of the people that might cause you trouble."

Mitchell looked blank. He turned to Case.

"Is the man crazy?" he asked.

Case shook his head. There was no expression on his face. He looked as bleak and cold as a piece of granite.

"Sand's on the way out and he knows it," he said. "He's grasping at straws."

Sand was near the door. He turned around and looked at it, wondering how far he could get.

"I wouldn't go out that door if I were you," Mitchell snapped. "I'll have you picked up before you can leave the building."

Sand turned back and anger shone in his eyes.

He said: "Am I to understand that you're getting rid of me to protect yourself?"

"Say it the way you want to," Mitchell said, "I'm arresting you for the murder of Ely Green. There'll be no jury trial for you, Sand. I'm going to

send you straight to Detecto. I'll get permission from the State to do it. You'll save the court time and money, Sand, and you'll burn beside Sam Fletcher, the other wise guy who tried to beat his rap."

Sand was watching Jim Case. There was no comfort in the inspector's eyes. Was he mistaken, or did he see the ghost of a smile playing around Case's rugged face? He couldn't be sure.

"Okay, Mitchell," he said. "Have it your way. Just be sure you read all the rules, because if you slip anywhere along the line, God pity you. The voters won't."

EVENTS took place swiftly for Ray Sand. Events that forecast nothing but ill luck for him. To his amazement, Sue Fletcher seemed to take a new interest in him, now that he was in trouble.

With Ely Green dead, he, Ray Sand, must face Detecto. He had little doubt of the decision the machine would make. He was sure now that he had actually talked with the machine yesterday. His better sense told him that regardless of how impossible it all seemed, the interview with Detecto had actually taken place.

The small courtroom was hot and dusty. Open windows along one side let in the noise of the elevated trains and the sounds of traffic from the street below. A small group of people sat quietly in court. Two State mechanics in white coveralls worked over Detecto, grooming it for the test.

District Attorney Fred Mitchell entered the room, escorting two elderly gentlemen in neat gray suits. These were members of the State Senate, come to witness Detecto at work. Professor Judson, pale and scrawny as ever, walked through a side door and exchanged words with the mechanics. The

men nodded, gathered their kits and left. The room was silent again, save for the rustle of skirts and the occasional clearing of a throat.

Inspector Jim Case stood in the hall, Ray Sand at his side, a uniformed officer beyond Sand.

"You should have been smart, Sand," Case said. "All this might have been avoided."

Sand was thinking of the machine. He couldn't think of any way to fight back. The machine would recognize him at once.

"Detecto is sure to act in the favor of justice," he said dryly. "What have I got to worry about?"

"Nothing," Case said, "if you didn't murder Green."

Sand chuckled. It was a hard, mirthless sound.

"I almost wish I had, now," he said.

The machinery inside Detecto started to hum. Sand stumbled forward, guided by Case's hand. He hardly saw the people around him as he walked toward the machine.

"So *you're back again*," the voice said suddenly. It filled his head, making it ache and throb. "*You're back, and this time as a murderer—the man I am to judge.*"

"Rotten justice," Sand said loudly. "Rotten, synthetic justice."

"Sit down," an officer said. "Sit down and be quiet."

SAND was startled. It seemed to him that the others should have heard the voice also. They couldn't understand his outburst. He seemed to be talking to himself. He sat down in the small, metal chair and waited dumbly while they strapped his wrists to the arms and applied the metal clamps.

"*You're going to die*," the voice said very clearly. "*You're going to burn in the chair, and all because men trust the*

honesty of my judgment."

He tried to ignore the voice. He stared at the spectators and saw only curiosity in their eyes. He looked at Mitchell. Mitchell was relaxed. His eyes were cold and bright. He arose to his feet.

"I am authorized to conduct this court," he said. His words were like drops of ice water on Sand's brain. "The prisoner has been accused of murdering a wealthy banker of this city, Ely Green."

Mitchell nodded toward Professor Judson.

"You may proceed," he said.

Judson leaned forward. His eyes were close to Sand's face. They were kindly eyes. The eyes of a man who did not know what a monster he had created.

"Your name is Raymond Sand?"

"Yes," Sand said. He saw Detecto's reflection in a small mirror across the room. The red eyes blinking green, as they confessed his words were spoken truthfully. He tried to watch that mirror, refusing to look anywhere else.

"You are a private detective?"

"Yes," Sand said. The tubes flashed green again: truth.

"*See how clever I am?*" Detecto whispered to him. "*See how I seem to obey so nicely? Wait . . .*"

"Damn you!" Sand shouted.

Mitchell was on his feet.

"The prisoner will confine himself to answering questions, and not to insulting the court," he snapped.

Sand's face was flaming red. He said nothing. He waited, dreading the moment the machine would speak again.

Professor Judson was talking. Sand tried to listen.

"Is it true that you entered Ely Green's private office, found him alone and murdered him?"

"No!" Sand shouted. He couldn't control his voice now. His nerves were

taut. "It is not true. Green was dead when I arrived."

A HISS of voices sounded around him. It had come. In the mirror he saw the tubes flashing wildly. Flashing red, for blood and for death.

"I didn't kill Green!" he shouted, trying to force himself free from the heavy cables.

"*But they all believe you did,*" the horrible voice of Detecto hissed in his ears. "*They will punish you because I have told them to.*"

Those were Detecto's only words, but they were enough. The tubes continued to blink red, making sure he had been branded a liar.

Mitchell stood up. The two Senators stood up, nodding at each other, speaking in low voices.

No one seemed interested in Raymond Sand now. All eyes were on Mitchell.

"Detecto has handed down the final decision," Mitchell said curtly.

Sand's head ached dully. He remembered hearing these words only a few hours ago. Remembered the fearful, hunted look on Sam Fletcher's face. It seemed to him that the cables were pressing more tightly against him, preventing his escape.

Sand's eyes were on Mitchell. The district attorney was leaving the room. Near the back of the court, Case had arisen and gone out. A low whisper of excitement came from the spectators. Everyone seemed to be waiting, tensely. For what?

Mitchell came in again, followed by three police officers. Among them, a small man came, head down, clad in prison gray. Mitchell led the group forward until he stood before Sand. Then the man in gray looked at Sand.

"Green," Sand said, his eyes wide with astonishment. "Ely Green."

Mitchell turned and faced the court. "Raymond Sand, the man on trial," he said clearly, "is innocent. He brought in evidence that aroused distrust in our minds toward the machine that has been judging our murder cases. He was purposely framed by the police department, and made to appear guilty of murdering Ely Green, the prisoner who stands here before you now."

SAND didn't hear his voice clearly. He felt suddenly choked and heard the low, throaty sob of Detecto's voice as it seemed to realize what had happened. Then his blood was pumping through his veins violently, and the cables on his wrists twisted upward and swirled around his neck.

He heard Jim Case's voice suddenly, shouting a warning.

"Shut off that damned machine."

Sand was fighting now. Not with his hands, but with his mind.

"*You can't win,*" Detecto was saying in his ear. *I'll conquer you first. They can't turn me off. I've grown too powerful. My brain will reach out and control the entire city. They can't harm me.*"

Something snapped inside Sand's brain. He had to hold out, to conquer the mechanical demon in the black box.

"You can't control the city," he shouted. The court room was silent. He could see a ring of bewildered faces staring up at him. "You can't move."

"Turn off that switch!"

Case was still shouting, running toward the wall switch. He reached it and threw off the power.

At once the cables grew loose on Sand's neck and he felt the blood flowing back into his head.

But the machine hadn't been turned entirely off. The brain was still functioning within Detecto.

"*You can't destroy me now,*" the

voice said. It grew powerful, more confident. Then Sand knew that he wasn't the only person who could hear, who listened to the mechanical voice. Mouths were open, eyes were staring at Detecto. Case was at Sand's side, loosening the cables.

"You've got to destroy the box," Sand mumbled.

The cables were free. Half a dozen policemen ran from the room.

Detecto's voice was roaring like a wind through the room.

"*You can't leave the room,*" it shouted. *"You haven't the power to move against my orders."*

The men halted in their tracks, paralyzed by the strange hypnotism of the machine. Case was cursing loudly, ordering them out. Sand was free now, but he couldn't move.

"*I'm going to kill,*" Detecto said. *"Kill slowly, with the power of my brain. Destroy you all, here, where you stand. You're fools, all of you. Weak, blind fools."*

The voice held them. Held Sand where he stood, near the machine. Riveted the others to the floor, like dead men, standing erect.

Sand's eyes traveled over the tubes, stopped on the mechanical eyes. They were glowing angrily. If he could get the power to lift an arm, to smash those red tubes.

He started to talk soothingly.

"What good will it do to kill? You cannot move. There would be no one left to obey your orders, to recognize your power."

Detecto seemed baffled. As its mind pondered on the question, the power seemed to relax a bit. Like the human mind, Detecto wasn't capable of concentrating completely on one subject.

Sand could move his finger tips. He flexed them slowly.

"You are powerful," he said. "You

could rule all mankind."

The power was growing weaker. Sand knew that Detecto was baffled now, trying to reason slowly with its metallic brain.

"Men are fools—men are fools."

Sand swung his arm upward suddenly and brought it down on the glowing tubes. Detecto realized what was happening. With a scream of hate, the brain reverted to its paralyzing power and tried to prevent Sand's arm from coming down. Terrible pain shot through Sand, freezing him once more to the spot, but not before his arm smashed across the rows of red and white tubes that crashed and fell in tiny glass splinters to the floor.

Slowly Sand crumpled to the floor as consciousness left him.

"THAT'S all there is to it," Mitchell said, wiping his forehead. "We knew that you were trying to outwit the machine. Case turned the evidence over to me and I thought it sounded convincing. We checked up and decided that we should do something to prove that the machine had gone haywire."

He paused and smiled at Sand, then at Sue Fletcher, who was sitting on the edge of Sand's cot.

"When you made an appointment with Case at Green's office, you gave us our opportunity. We took a chance on your mistaking anyone you found there for Green. I happened to know

that you hadn't seen Green in years. I had Case borrow the body of an unidentified accident victim at the morgue and plant it in Green's office. We arrested Green and kept him out of sight until we were sure that you had trapped the machine into giving a false decision."

Case walked over and grinned down at Sand.

"I know it was a dirty trick to pull on you but it was the only way we could trip up the machine," he said. "I hope you won't hold a grudge?"

Sand smiled.

"After some of those names I called you, Inspector," he admitted, "I guess we're about even."

"That's about all there is to it," Mitchell confessed, "except that we're all lucky that you realized what that machine was doing, and had the will power that most of us lacked. The mental power to confuse and destroy it."

"I'll leave Miss Fletcher with you, just to tell you a few nice things about yourself that we may have overlooked."

Sand pushed himself upward and got one arm around Sue's waist. He drew her face down close to his.

"It's all right with you," he said.

She smiled and kissed him.

Jim Case, watching the pair from the door, scratched his chin and took hold of Mitchell's arm.

"Let's get out of here," he said. "That guy Sand gets *everything* he goes after."

THE END

OUR BROTHERS, THE COTTON RATS

FOR a long time, research on how to combat typhus fever was being hampered because there were no animals to be had that would be suitable "guinea pigs." After much experimentation Drs. J. C. Snyder and C. R. Anderson, of the Rockefeller Foundation, found the answer to this problem in the cotton rat. They found that the effects of typhus on this animal were exactly the same as they were on humans. When typhus fever germs were injected into cot-

ton rats, they died in about four days. However, if the cotton rats were inoculated with blood serum from patients who had recovered two weeks before from typhus fever, the typhus germs would not harm them.

These cotton rats deserve a large share of the present successes that typhus research has had and many American soldiers owe their lives to them.

—J. Nelson

AMAZING

Facts

By
A. MORRIS

NOT long ago a group of scientists aboard a research vessel conducted this interesting experiment. They had set sail on one of those scientific exploratory trips which have shown so much success in recent years in probing the mysteries of the ocean deep.

From the ship they dropped a dredge at the end of several miles of sturdy steel wire. They scraped the bottom with the dredge and brought the scrapings aboard for examination. What they actually had was a sample of the slimy covering that blankets the ocean floor which we call "ooze." In it is to be found material from all parts of the ocean which has settled to the bottom through millions of years.

The sample which they examined contained bones of animals extinct for millions of years, bushels of manganese nodules, five hundred sharks' teeth including specimens more than four inches long, five hundred whale bone fragments, and particles derived from solar space, "cosmic dust."

How's that for "pot luck"?

IT IS easy enough for us to commend ourselves for our advanced civilization. With the sky-scraper, the turbine, the airplane, and the wireless to bear witness we are prone to pat ourselves on the back as being truly advanced. Moreover, we even conclude that all these "things" that we have built indicate that our minds are far superior now than in any of the days gone by. Patronizingly, we talk, at the seeming ignorance and lack of civilization of ancient times. Perhaps, but—

A group of geologists have uncovered in a layer of earth, which indicates an age of about 800,000 years, a collection of flint implements which ancient man used in his hunting of wild game. These implements seem crude, and we at first think that it does not require a very high order of intelligence to fashion them. But try to make one of these tools out of a rude boulder with your own hands. Actually you will find yourself faced with a tough technical and mechanical problem. One distinguished archeologist who had practiced flint-making for years is unable with all the aid of modern craftsmanship to produce a flint of the beak-beaked type comparable to the implements fashioned by the hand of our early ancestors!

AMERICANS all over the nation are answering the call of the Red Cross for blood donors but the demands of the armed forces as well as civilian needs is steadily increasing. A new source may be possible according to Dr. Edwin J. Cohn, professor of Biological Chemistry. Although the details of his experiments conducted at Harvard University are a closely guarded military secret, we do learn that he has successfully produced a plasma from beef cattle blood that can be given to human beings.

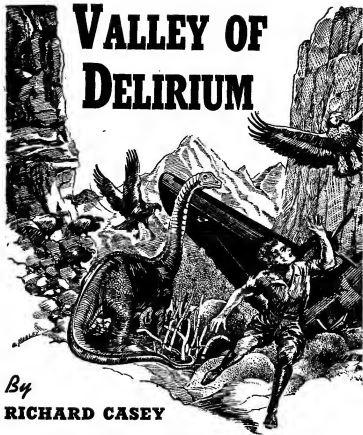
Tests made with the plasma on over 2,700 inmates of the state prisons have produced favorable results. There are many advantages to the use of beef blood; namely, it is not necessary to type the blood, there is a tremendous supply to be had, and the blood can be stored at higher temperatures than that required by human plasma.

The work is going on under contract with the committee on Medical Research of the Office of Scientific Research and Development, U. S. War Department. If finally proved successful, this new source of blood plasma will prove a life-saver for our boys on all war fronts.

STRIKING evidence of the global character of this war is presented on the outskirts of Melbourne, Australia, where a community of Indonesians and Chinese from the Netherlands East Indies are living as they did back in the NEI Archipelago while the men of the group work as skilled craftsmen in factories that turn out Allied aircraft. The men dress in western style, but the women still wear the traditional sarong and prepare their own native foods in two community kitchens.

Many members of the colony arrived in Melbourne in March, 1942, aboard the ship on which they had made their escape from the Indies, after the fall of Bandung. Originally from Sumatra, the men of the group had been trained as mechanics in one of the best-equipped ordnance factories in the Netherlands Indies. Alongside Australian mechanics, they are turning out the bombers which almost daily attack the Japanese defenses in the South Pacific. Their Australian foreman has the highest praise for their ability and tenacity, and, more especially, for their excellent eyesight which is used to the greatest advantage in the work they do.

VALLEY OF DELIRIUM



By

RICHARD CASEY

"**P**AN American Radio, Station XZX at Lima—to Neal Mason. Can you hear me Mason? Come in."

The little South American leaned anxiously over the loudspeaker on the desk, switched the controls and waited. The tiny radio room was filled with the

loud crackle of static.

"Mason to XZX. Say, Señor Alverado, who told you about the weather up here? You must have sent up the wrong balloon. This is the worst hurricane I've ever wrestled with."

Alverado's lips grew white. He was very frightened.



A mountainous, scaly monster hurtled toward me, its jaws gaping wide . . .

EVEN science fiction seemed to have gone mad in this weird valley where absolutely nothing made sense

"XZX to—to Mason," he stammered. "Listen, Mason, you'll have to turn back. The weather bureau has just reported a bad storm sweeping through the pass from Peru. You'll have to turn back. Come in."

The static crackle again and above it, the sounds of a high wind.

"Mason to XZX. Tell the weather bureau I could have told them about the storm before they knew it existed. Hell, man, I'm delivering a fighter plane to the Peruvian Government! If you knew my boss back in the states, you'd know I face a worse death by turning back. Be seeing you."

The loudspeaker went dead. Alverado shouted into the mike.

"XZX to Mason. XZX to Mason. Come in please."

Silence.

Outside, dust rolled up as the mail plane bit the runway of the Lima airport. The sun was calm and hot on the flat plain. The Andes were a foreboding wall in the distance.

The speaker remained silent. Alverado tried again. This time desperation showed clearly on his thin face.

"XZX to Mason. For God's sake, man, answer me will you? You're running into one of the worst storm pockets in the world. You still have a chance to turn back."

The loudspeaker startled him, breaking in with a roar of sound. Mason's voice was distorted and far away.

"You aren't lying. Hold on, Bub, here goes nothing."

Alverado sat very still, his hands gripping the desk before him as though he were at the controls of the powerful fighter somewhere in the Andes. The speaker was still open. The sound of tinkling glass came over it.

"— buzzards!" Mason's words were choked off by anger.

Then there was only the screaming of the storm and the more sinister rising howl of motors as they roared downward, out of control.

Alverado tensed, his teeth gritted tightly together waiting for the crash. It came, a tearing, grinding explosion of metal against rock. The loudspeaker miraculously continued to record the crash of the American plane.

Alverado tried again, shouting into the mike.

"XZX to Mason. Mason, are you alive? Come in! Come in!"

He could hear the faint, pained breathing coming over the speaker. Then, as though Neal Mason was gath-

ering all the strength he had to speak, came the last words from the crashed pilot.

"I—think—I'm in hell."

Alverado went on shouting for several minutes, but only the sound of the storm came back. He couldn't even hear Mason's breath now, and in a few minutes the radio went dead.

Alverado arose slowly, turned off the speaker. It would be necessary to call Buffalo, U.S.A., and notify Mason's employer. It would also be necessary to go through the mechanical process of sending out a rescue party. They stood little chance of locating the hattered fighter in the deep canyons that slashed the Andes.

NEAL MASON opened one eye slowly and stared around. He recognized the battered interior of the plane, and realized that somehow he had lived through the terrible dive toward earth. Something had forced him to let go of the wheel, and before he could regain his grip the sensitive plane had been caught by the storm and tossed against the canyon wall.

He sat up painfully, trying to think.

Now he remembered. A buzzard had been tossed against the windshield and crashed into his face. He had been talking to the airport at Lima when it happened.

He moved around painfully until he faced the radio board. Reaching for the button, he fiddled with it idly. The radio was dead, smashed.

He was down somewhere, lost in the Andes. The plane had landed in a deep tropical canyon. He wondered how many broken bones he had suffered, and tried to prove something by climbing erect. His face was reflected faintly from the remains of the broken windshield. He noted a few minor wounds on his right cheek. His right leg moved

reluctantly. It pained him below the knee. It would bend however, and probably wasn't broken.

He drew himself up to the level of the cockpit window and stared out at a cliff surrounded terrain.

The plane was in fairly good shape, considering the force of the fall. One wing was buried in the ground, and the left motor was half gone. The cannon on the snout of the fighter pointed upward, still intact. Then he caught sight of three gawky buzzards lined up expectantly on the rocks near the edge of the narrow valley. Their long featherless necks darted out questioningly as he moved, and beady eyes stared with disappointment.

"Not today, brothers," he said grimly. "Maybe tomorrow. Who knows?"

He wasn't in bad shape. His heavy boots, whipcords and tan shirt were still intact. In the rear compartment were half a dozen sub-machine guns, a box of side-arms and plenty of ammunition for the wing guns and cannon. All this was meant for delivery to the Peruvian government.

He also had a case of "K" rations.

He started to disentangle himself from the cockpit, and pushed one booted foot over the edge of it. As he did so a huge shadow passed over his head. Instantly he slipped back to safety, flattening against the inside of the plane. He looked upward and fear struck him for the first time.

A huge, snaky neck twisted back and forth above his head. His gaze traveled down the neck slowly to the ponderous dark body and dragging tail. This was bigger than any prehistoric monster he had ever seen rehabilitated in a museum.

"Suffering Moses!" Mason's eyes widened.

The monster was as big as the plane. Its hide would have made enough

overnight bags to supply the city of New York. The monster stared at Mason and Mason stared back. It was a deadlock. Then the monster moved ponderously nearer the plane. His tail dragged after him as though too heavy for him to lift.

"Dinosaurs Good Lord, home was never like this."

Mason wondered what would break the spell. Perhaps his brain would spin around again and drop him in Peru where he belonged. One visit to the Field Museum hadn't ought to effect a man like this.

The dinosaur continued to stare at Mason, and the pilot tried to think of a good way to disappear. Unfortunately not even a fair method presented itself. The sun was rising above the top of the cliff. Something about the sun troubled the aviator's sense of direction. He glanced nervously at the compass.

The sun was rising in the west!

The crash must have broken the compass. Mason banged his fist against the glass covering. The compass hand jiggled and settled back to the same point. It worked perfectly. But, suffering Moses, the sun wasn't supposed to rise in the west, and that was just what it was doing.

MASON looked up at the dinosaur but the beast was still there, blinking uncertainly, its tail swishing back and forth on the rough floor of the canyon. A pleading look came into Mason's eyes.

"Look, Dino old boy. Go 'way, will you? Let's save this personal appearance until I'm on a binge. You haven't any right popping up when I'm dead sober."

"Hey!" Mason shouted, and dino drew back as though he'd been slapped. There was no doubting the expression of sadness and distrust that flooded his

unbecoming face.

By crawling behind the pilot's seat, Mason could reach the ammunition and the rations. Dino seemed determined to stick around for the whole show, and thus far hadn't shown any sign of attacking.

"If this be madness," Mason misquoted from some long-forgotten source. "Make the best of it."

Still believing that he was in some weird state of coma, he crawled over the seat, found the boxes and broke them open. He filled an automatic and slipped it into his belt. He filled both pockets with cartridges, found a sub-machine gun in another crate and grasped it, together with a half-dozen boxes of "K" ration. Then he made his way back to the cockpit.

His visitor was still present.

Mason broke open a box of rations and downed some of the chocolate. He felt a little better. Yet, with his senses slowly returning, the dino became more and more of a problem for him to puzzle out.

"No time machine stuff," he muttered. "I'm still in the Andes all right."

Just to make sure, he turned and stared into the distance toward the end of the valley. Huge peaks rose rank upon rank into the blue sky. He looked up at the dino.

"You don't fit, Bub. How about scrambling and making the scenery a little more normal?"

Dino looked hurt. His neck twisted downward suddenly. Thinking that he must look like a dainty morsel, Mason tried to ward off the coming blow with a box of "K" ration. Dino opened his mouth and swallowed the entire box with one gulp.

A broad, wet tongue swooped out and splashed across Mason's face. It was like being hit with a wet towel. He wiped his face with his shirt sleeve and

swore loudly. This four-legged Woolworth building was actually being affectionate! He stared at the dino with a new distrust.

"Don't do that again, you big lug."

Dino looked so hurt that Mason was a little ashamed.

"The strength of a dynamo and the brains of a flea," he said dreamily.

"Hey, by golly, that's it. From now on his name is Dina-Mo."

The dinosaur seemed pleased with the name. His head started downward for another affectionate caress, but Mason saw it coming and ducked.

WITH the dry food inside him, Mason became increasingly thirsty. Up the hill a short distance was a small pool of water. A creek fed it, probably running from under the cliff. If Dina-Mo would leave him alone, he'd try to get some water.

He pushed a cautious boot over the edge of the plane, hesitated and dropped to the ground. Mo didn't even seem curious. He was completely satisfied with the box of "K" ration that slowly dissolved in his stomach.

Mason ran swiftly toward the water. The three vultures shrugged in disgust and flapped away to meatier fields.

Mason had nearly reached the pool when he heard a wild, inhuman scream come from the cliff. He had only a second to turn and stare upward with startled eyes. He was paralyzed.

A mountainous, scaly monster hurtled downward, directly at him. It was one of Mo's big brothers, and it wasn't pleasant to look at. A great scale covered head twisted in the air. The mouth, filled with teeth that would have shamed a tooth-paste commercial, was wide open. The lashing, furious tail and banded feet were close to Mason.

Mason dropped flat on his face and waited for the weight of the thing to

crush him into the earth. The monster hit with earth shaking force and Mason turned to see that Mo's little chum had missed on the first leap. The tail lashed around, missing his head by inches.

Before he could rise, something small and savage swished through the air over his head. The scaly monster turned and with a scream of fear, high-tailed it up the valley. What caused this hasty retreat?

An eagle had driven downward with terrifying force and was riding on the monster's head. The eagle's claws were set deep into the scales, and the bird's beak pecked savagely at the fleshy substance on the side of the head.

Mason staggered uncertainly to his feet.

What kind of a crazy, unreasonable world was this? The scaly monster had been driven into a fit by a bird only a fraction of its size. The sun was rising in the west.

He watched until the pair were out of sight among the rocks. Then fearing another attack, he kneeled swiftly by the pool and sucked water from his cupped hands. He stood up quickly. About to turn back toward the plane he stopped short, staring down at the small creek.

Suffering Moses! This capped the climax. This took the blue ribbon, the iron cross, and outdid the liar's club.

The stream that fed the pool was running up-hill from somewhere deep in the valley.

There was very little left to do now but return to the plane and go quietly insane. He moved with leaden feet back to the wrecked fighter, crawled in without even taking a second look at Dina-Mo, and slumped down in the cockpit.

A small speck hurtled through the air, and the eagle that had saved his life dived down and sat stiffly on the edge of the cockpit. Mason stared at the bird and the bird blinked.

"Thanks," Mason said, in a spiritless voice. "Eagle of Freedom. Symbol of the U.S.A."

The eagle ruffled its feathers and looked very satisfied. Then Mason remembered that the eagle wasn't a citizen of the United States, and therefore not a genuine symbol of the flag.

"Anyhow," he added in a sleepy, half apologetic tone, "Thanks for the nice Pan-American spirit. I'll recommend you for a medal."

His head drooped forward slowly, and the sun grew warm on the back of his neck. He slept.

MASON didn't plan on the trip of exploration. It was dark when he awakened, and save for the sound of the stream that ran up-hill, the canyon was quiet. He was thirsty, and decided to chance another trip to the pool. He slipped out of the cockpit and landed on a huge boulder that he had not remembered from this morning. Before he could climb to the ground, the boulder stood up and started to move around restlessly.

Mason grasped the boulder and hung on. Then he remembered Dina-Mo and wondered why the beast had to pick this spot to catch up on his beauty sleep.

Dina-Mo misinterpreted M a s o n ' s move. To him, it was a signal to start for parts unknown. He did just that, with a lazy rippling of his leg and neck muscles. The tail, as usual, dragged reluctantly behind. After the first novelty of riding a pre-historic monster wore off, Mason settled down grimly to the task of riding bareback. It was something like tossing around on a huge mound of bouncing jello. The eagle fluttered after them and settled on Mo's head, where he again folded his head out of sight under his wing and went to sleep. Dina-Mo moved slowly down the steep incline toward the lower valley.

His passengers didn't trouble him in the least.

It was not for Mason to question the rough trail that Mo followed. He was using all his talent, and his finger nails, to retain his grip on the leathery back.

It wouldn't have been so bad, he thought, to ride down a long bill on a dinosaur's back, if he didn't know that an eagle could scare hell out of a monster, and the sun could rise in the west, and the stream that they were following ran swiftly up-hill. Conditions were complicated a little more than he wanted to admit.

The canyon into which Mason's plane had crashed, and the valley that Dina-Mo was ambling toward, went together to shape a huge letter T. The valley filled with jungle growth and tall, lush grass formed the upper half of the letter. It was thousands of feet deep, and huge peaks rose into the dark sky on all sides. Mason dreaded the rising of the sun again, because he knew that light would put things out of focus worse than ever. But the sun did come up, and it came up in the south this time, evidently just for the novelty of it.

Mason was beyond feeling any shock by this time. He smiled at the sun, offered it a pleasant good morning, and added:

"I've got a compass back up on the hill, if you decide to get your direction straightened out."

Evidently the sun didn't care where it came from, because its only response was to climb higher into the sky at a terrific rate of speed. Mo showed signs of wanting breakfast, and Mason teetered precariously on his perch while Mo wrapped his tail around the two-foot trunk of a palm tree and pulled it up by the roots.

"And we use an axe, saw and dynamite," Mason commented caustically.

"My, my, but isn't the modern age a wonderful thing."

Mo munched contentedly at palm fronds, and cracked open an occasional coconut for Mason. The eagle flew away for a while, and came back with two large fish in his beak. One he dropped at Mason's side, and the other he dropped on the ground and started to tear apart with his sharp talons.

The coconuts weren't bad, but when it came to the fish, Mason revolted. He had never seen a fish before that had four perfectly developed legs, and a face that reminded him of Charlie McCarthy. The combination simply wasn't an appetite builder.

WITH full stomachs, the trio ventured into the jungle along the bottomland of the valley. If Mason had been accustomed to spending much time over the mystery of growing things, he might have had cause to wonder at the hodge-podge of prehistoric vegetation, common trees like pine and elm all interwoven with teak and the precious woods of the tropics. He did wonder, however, how it was that bananas managed to grow from the tops of evergreen giants.

With the sun hidden by foliage, Mason settled down on Dina-Mo's broad back. The eagle nestled at his side, and they crashed onward through the jungle.

Old Mo seemed to experience great delight in doing things the hard way. If a tree was small enough for him to pull out by the roots, and most of them were, Mo wouldn't think of going around it. Mason saw no other sign of strange creatures who inhabited the valley until early afternoon. When he finally spotted them, he wished that he hadn't.

Mo came out on the banks of a stream which was, according to form, rushing

merrily up-hill. He stopped short, his long neck weaving from side to side. A sound like the noise a horse makes when it swallows a bumble-bee emerged from Mo's throat. The eagle left his perch swiftly and hovered above them. Then Mason saw what caused the commotion.

Until now he had been able to make a queer sort of sense of the wild life he had seen. Now, even that was impossible.

Near the stream were three giant sand hills, probably forty feet across the top and rising well above the flat plain. Through holes at the base of these hills hundreds of ants were crawling in and out. They were like the ants that he had seen in the cracks between sidewalks back home except for one startling difference.

Every ant that crawled restlessly over the plain was as big as the frightened Dina-Mo.

He remembered seeing an enlarged picture of a common house-fly once, a long time ago, and making the bright remark that people were lucky that insects didn't grow as large as men.

Right now he'd welcome an ant the size of a man.

Dinosaurs suddenly became very commonplace. Mason's one thought was to get away as fast as possible.

The startled scream of the eagle brought him back to reality and he clung tightly to Mo's back as Mo whirled around with a snort and plunged into the jungle.

Mason lost his balance and toppled backward. He landed in the tangled undergrowth, picked himself up and decided that he was still alive and insane.

Dina-Mo evidently didn't notice the loss of his passenger because the big fellow was still on the run, his body shaking the earth somewhere far ahead.

Mason started to run. Over his shoulder, he could see the gigantic ants

scuttling toward him.

Suffering Moses, if he only had the sub-machine gun with him . . . As he ran, he drew the automatic from his belt and slipped in a clip of cartridges.

How would it sound? Aviator fights Ant Colony With Automatic. Is Captured By Insects.

Definitely not acceptable copy for a home town paper he decided, and ran faster than ever.

He reached the banks of another backward river, and was about to plunge in. A low, musical laugh stopped him in his tracks.

Neal Mason pivoted, his mouth hanging wide open. Dina-Mo was sitting on the river bank, his head buried beneath the cool water. Sitting at Mo's side, thumping the dinosaur's neck gently with a knotted club, was the prettiest girl Mason had ever stopped running away from.

He could hear the ants coming, knocking down trees in their charge through the jungle. Still, this girl was enough to make a man forget that he was about to be eaten alive. She sat there calmly, clad in a neat jungle creation that would have made Johnny Weismuller howl with appreciation and dunk himself immediately into the river at her feet. Her hair, under the rays of the backward sun, was a glowing rich auburn. Tanned cheeks, and white teeth that flashed against red lips made her the nicest dish he had ever seen.

"You *aren't* running away from the ants?"

MASON was slightly angry at the events that were taking place. Evidently Mo was the girl's personal pet. The eagle flew down and settled on her shoulder.

He walked toward her aware of his dirty, torn clothing. As he approached, he pocketed the automatic meekly, de-

ciding that the army of approaching ants would have to be disregarded. He wondered how many bites he would make for the overgrown insects.

"I—I wasn't exactly walking, I'll admit," he said lamely, and his face turned a brick red. "Say. Are you laughing at me?"

The girl looked solemn. He liked the way she shrugged her brown shoulders before answering.

"You *did* look funny making that mad dash away from the ants. They won't touch you. It's just a bluff they put up to keep us away from their homes."

He decided that perhaps she was right. The sounds behind him had died out.

"I'm glad of that," he admitted. It dawned on him that this meeting was the most absurd thing that had happened yet. A perfectly normal and very lovely girl, sitting here by a stream in the jungle. Nor did she seem the least bit surprised at his presence.

"How did you get here?" he asked.

She stared back at him and anger kindled her eyes.

"Now you've spoiled everything."

Mason sat down beside her.

"I don't get it," he protested. "What could I spoil in this collection of freaks and fauna?"

"I was going to ask you what you were doing here, and you asked me first."

She pouted.

Oh, oh! a warning voice said in Mason's head. *Look out for her. She'll trip you up like the rest of them did.*

"My name is Neal Mason," he explained. "I was delivering a war plane to the Peruvian Government. I got caught in a storm and crashed. Could you tell me how to get out of here?"

She looked so bewildered and pretty in her ensemble of prepared leopard

skin and dinosaur sandals, that he was sorry he'd troubled her.

"I know nothing of the places you mention," she said in a perplexed voice. "I have always lived in Planta. I know nothing of what lies beyond the peaks."

Poor kid, Mason thought. She must be as loony as the remainder of the valley. No wonder she was bewildered. To live in this goofy place and have to stay here all her life would be enough to worry anyone. He shouldn't have mentioned his own troubles.

"So this is Planta?" he said aloud. Then because she acted a little frightened, he added, "Always wanted to visit Planta. Never had time. You'll have to show me around."

She was delighted. As she sprang to her feet he had a better opportunity to notice the lithe, graceful body. Mason wished with all his heart that he could swing through the trees, and howl like Johnny Weismuller did when capturing his mate. Somehow, he'd have to be a second Tarzan to win such a glorious creature. She stood a few feet away, staring at him with a happy smile.

"Come." Her voice was pleasant, and at the same time demanding.

He followed her. Then it dawned on Mason that this girl certainly hadn't appeared in the valley of Planta without benefit of parents. There must be other people here.

"HEY," he shouted. "Wait a minute."

She turned and waited for him.

"You're not tired so soon?"

He shook his head.

"I was thinking. You have a father and mother?"

The girl looked momentarily sad.

"I have no mother," she said, and then smiled brightly, "but I have a father."

Neal shook his head solemnly. He tried again.

"There are other people in the valley?"

"Only a few," she said. "Freeze and Fitch live a few miles from us."

Freeze and Fitch? Now wait a minute. This has gone far enough. For Heaven's sake don't ask her any more questions or you'll go nuts. Wait and see for yourself.

"I—guess we'd better go to your home," he said in a weak voice. "How far is it?"

The girl held up her right hand, and spreading her dainty fingers, started to count.

"One-two-three-six-ten," she said softly. Then she pointed toward the far end of the valley from which Mason had come. "The city is that way." She turned away from him, and started walking swiftly away from the direction she had indicated.

"Wait a minute," Mason said doubtfully. "Aren't you going directly away from your city?"

A horrible doubt was growing in his mind. The girl turned around, and her eyes were flashing angrily.

"Don't you tell me where to go," she cried. "Of course we are going away from the city. This is the shortest way."

Mason's last nerve snapped like a bow-string, and his teeth clamped together savagely.

"*Suffering Moses,*" he groaned. "*I might have known it.*"

The little parade wound slowly up the valley away from the city they were approaching. The girl went first, still frowning because she had been questioned. Behind her swung Dina-Mo, and perched on Mo's head was the eagle.

Neal Mason staggered along behind like a prisoner condemned to the salt mines. He might not be quite ready for a padded cell, but he knew that he was a dangerous borderline case.

Once, during the march, Mo twisted his neck about and stared back to make sure Mason was still with them. At the same time, the girl's voice rang out clearly.

"Are you still there?"

Mason, staring at the rocking figure of Dina-Mo, thought the words came from the monster's mouth. He nodded dumbly, never questioning Mo's ability to carry on a conversation.

THE strange procession stood on the brink of a cliff, staring down into a lower valley. In spite of his promise that nothing else could surprise him, Neal Mason received a shock. This was the city she had mentioned.

It stretched across the floor of the valley, a dream of the future. Tall cylindrical towers sprang into the sky, and interwoven among them were suspension highways that were finer than anything Mason had ever seen on the drawing board. Strangely enough, the city showed no sign of life.

Mason stared at the girl who was at this moment ignoring the city, and crawling up Dina-Mo's rough flank. She turned and called to him.

"You can ride now." She seemed a bit more friendly. "We must descend the cliff and the trail is dangerous."

Mason found it hard to take his eyes away from the city below. Yet, with its deserted highways, it might as well be a gorgeous tomb. Mo turned his head and snorted impatiently. Mason came out of his trance and climbed to his place beside the girl.

The eagle had already flown ahead, and was soaring gracefully down the cliff toward the valley.

With his passengers reasonably secure, Mo started directly toward the edge of the precipice.

"Wait a minute," Mason shouted. "This isn't safe."

The girl laughed.

To keep from dying of fright, Mason refused to look ahead. Instead, he focused all his attention on the girl. It wasn't a bad idea. He decided that if she wasn't as goofy as the remainder of the valley, she'd look very nice in a housedress, ruling his little apartment back in Buffalo.

Mo had no intention of vaulting over the cliff. At the very edge he stopped, and the long neck traveled back and forth once. Apparently sure of himself, he chose a tiny trail that snaked downward and trusted his ponderous bulk to it. For the next half hour, Mason hung on with all his strength. The girl, riding easily, spent her time laughing at him.

Mo's broad body scraped the cliff on one side, and hung out in space on the other. The eagle complicated things by continually swooping down at Mason in a playful but rather suicidal manner.

They came out momentarily on a broad, flat ledge on the trail. Mo sat down abruptly and stretched his neck out full length. His eyes closed.

"Here we are," the girl said. "You are safe now."

"Here we are where?" Mason asked. "Weren't we going all the way to the city?"

The girl slipped to the ground. A surprised look swept her face.

"The city?"

"I thought that was where you lived?"

Mason followed her example and was standing at her side, staring around at the semi-circle of dark holes that pitted the side of the cliff. She swept her arm around, indicating the openings.

"But *this* is the city," she insisted. "You *didn't* think we were going to the ruins of the valley?"

Mason looked down again at the ruins. They still looked like a city of

an advanced age to him.

He munched his lip reflectively, and decided he'd better keep his mouth and his mind shut tightly from now on.

"You win," he said. "Now that we're here, just where *are* we?"

She grasped his arm.

"Come. You must meet my father."

MASON followed her toward one of the caves. As they drew near, a pair of creatures emerged into the light and stared at them. They were evidently mates, because one of the brutes was undoubtedly male, with his hairy face and long, brutish skull. A leopard hide covered part of his stocky, long armed body. The other was thick lipped and bow legged. Her arms reached to her ankles. Not a pleasant-looking reception committee, Mason thought.

Then a thought occurred to him that was so horrible he refused to believe it even on the grounds of what had already happened.

"You—you aren't the daughter of these . . . ?"

The girl stared at him, evidently puzzled by his odd expression. Then she fathomed his meaning.

"Oh dear no!" she said, and ran forward to grasp the arm of the cave-man. "Adam, I want you to meet—" she turned to Mason. "What *did* you say your name was?"

"Mason," he said gruffly. "Glad to meet you Adam. You got a nice place here."

That he thought, should be the approved method of conversing with a prehistoric cave-man. The cave-man sauntered toward him, his hairy paw extended for a hand clasp.

"Really," Adam said in a shocked voice. "Cawn't you speak better English, Old Chum? Your speech is shocking."

MASON managed to go through the formalities of meeting Adam, and found out that Eva, his spouse, was also up on her London manners.

"So nice," she murmured through horsey lips. "We have so few visitors."

"Father and I never see anyone from the outside," Mason's guide broke in. "Father is at home, isn't he Adam?"

Adam smiled, and Mason was reminded of something from a double feature nightmare.

"Oh, yes indeed," Adam looked very concerned. "I shall announce you. Won't you follow me, Mr. Mason?"

Mason found strength to nod, and moved into the cave behind Adam and the girl. Eva went down the trail, softly singing something about Berkeley Square.

The cave was rough and ugly only at the entrance. Once inside they passed through an opened door and into a neat set of rooms. Typically English, the set-up beat anything Mason had ever paid fifty a month to live in.

Adam entered a small, well furnished living room and said:

"Mr. English. Your daughter has returned, and she has brought a guest to see you."

Mason heard the cultured reply.

"Quite! Bring them in, will you. I'm terribly involved with that plan to harness the ants. Sounds feasible, but it does have its nasty angles."

"I'm sure I can make suggestions of importance," Adam answered. "We must talk later."

"Quite."

The girl had grown impatient. She left Mason and ran into the living room.

"Daddy, will you forget your old business for a few minutes?"

Mason saw Mr. English spring from his chair and take his daughter in his arms.

"Adam," English said in a stern

voice. "Why didn't you tell me my daughter had returned?"

Adam looked crestfallen.

"I'm sorry, sir. I really meant to."

Mason decided he might as well announce himself. He stepped through the door and faced the party. Adam had announced them. There was no limit to the things that could happen here.

"Sounds like another slip in the script," he mumbled. "Hello, Mr. English. My name's Neal Mason."

"Mason?" English let go of his daughter and faced the newcomer. "Why I've heard that name somewhere. Let me think."

He was a slim, carefully attired man. There was only one thing odd about his clothing. He was completely equipped with a pith helmet, tan shirt and shorts. His knees were so skinny that the knee caps stood out like buttons. He wore a stiff, carefully waxed mustache.

"I know," he shouted. "Masons—those fellows who lay bricks."

If that was meant to be a joke, Mason thought grimly, you sure laid a brick.

But Mr. English seemed quite pleased.

"Masons—bricks. Haw! Haw! You're quite a brick yourself, Mason. But I don't think I ever saw you before."

Adam was waiting in the background. The girl stared at Mason over her father's shoulder, as though seeing him for the first time.

"Yes," she said sternly. "We don't think we've ever seen you before."

Mason groaned.

"I was in a teensy-weensy airplane," he said, grinding his teeth. "A great big storm came up and made me . . ."

"Oh!" The girl seemed satisfied. "You're the man I met by the river aren't you?" She turned to her father.

"Never mind, Daddy, it's Mr. Mason. He's quite all right. You can trust him."

MR. ENGLISH seemed to relax. He offered a thin, white hand. Mason took it and they shook heartily.

"Edward English is the full name," he said.

"Mine's Faun," the girl interrupted. She was pouting. "Faun English, if anybody cares."

Mason was asked to repeat his entire story from the time he left Buffalo.

He was interrupted several times by Edward English.

"I say, I was in Buffalo once. Isn't that the place where people ride over the Niagara Falls in barrels?"

Mason grimaced.

"It has happened," he admitted. "They don't make a regular habit of it." Edward English chuckled.

"Americans make regular habits of the oddest things," he said. "Now, take the hot-dog for example."

"I'd like to," Mason admitted. "I'm half starved."

Adam received a lecture at this point for not having brought food.

"I told you to, you know," English insisted.

He had done no such thing, but Adam said he was sorry and returned several minutes later with a platter of roast beef and a bottle of liquid that tasted like next year's wine.

They dined heartily, and throughout the meal, Mason picked up information he was seeking. Edward English was an explorer. He had come here years ago, bringing his daughter and two friends with him. The trip was made from Peru, and during the darkness, one of the party stumbled into the upper valley. They all followed, and found that once they pulled their ropes after

them, they could find no way out.

"But it isn't half bad," English admitted. "Quite the pleasantest place in the world, except for Freaze and Fitch."

"And who are they," Mason wanted to know.

"Freaze and Fitch," English said with extreme distaste, "were my partners. Once they visited the deserted city, they got wild ideas. They may be down there right now, planning another attack."

"Then they have fought with you, and gone their own way?" Neal asked.

The Englishman nodded.

"Freaze and Fitch wanted to live down there, but we refused. You see Adam needed us. We don't care to mix up with ghosts and such. We quarreled, and ever since they've been causing us trouble."

MASON was too far into this thing now to back down. Faun was very attractive, in spite of her odd viewpoints. He decided to learn more, and did.

The huge, super-modern city was a deserted tomb of the past. When he considered the manner in which the valley seemed planned, this wasn't surprising. Time, somehow, lost all sight of its true path and moved in any direction it wished. If a dinosaur could live with an Englishman and eagles could run away from ants, surely cave-men might retreat from deserted cities of the future.

The colorful pair, Freaze and Fitch, wanted to start a new civilization in the deserted city. When Edward English refused to donate his daughter to the enterprise, they were angry. They spent their time dreaming up ways of getting Faun into their city of spires.

Mason, pounding around somewhat later on a small bed that had been do-

nated to him, took his place among the cave dwellers, and tried to reason out an escape from Planta. He hoped that the plan could include a way of bringing sanity back to Faun, and convincing her that Buffalo, with its barrels and falls, was a better place to live than the valley of Planta.

"BUT I tell you the plan is quite mad," Edward English insisted. "Freeze and Fitch won't help you. In fact, when they find out you are our guest, they'll throw us all in prison."

Neal Mason, Faun and her father were aboard Mo's broad back, moving down into the last valley of Planta. Ahead, the spires of the city were lost in the morning mist.

"Just take me close to the city," Mason begged. "You can turn back before anyone sees us. I'll go on alone."

Faun shuddered.

"They'll probably feed you to the giant ants," she said. "It's really a very unpleasant way to die."

Mason nodded.

"I imagine," he agreed. "But I'll have to take that chance. There's a war on and I've got to get out of this place somehow. You say they have an air-ship that will take me out. I'll take my own chances of talking them into the idea."

Edward English shrugged.

"I say old man, can't we convince you that Planta is a fine place to make your home? The war really doesn't need you, you know. There will be other wars later, and you might leave in time to see one or two of them."

Mason shook his head. He had made up his mind.

They were leaving the jungle, and Mo ambled ahead easily across the grass-covered approach to the city. From here, with the first rays of the sun touching its highest towers, the city

was even more lovely. Perhaps, Mason thought, I will be able to take home with me some of the ideas used here.

Someone had built this dream civilization, and died to leave it for the future. It might be possible to take plans home that could be used after the war.

Mo stopped, and tried in a sluggish manner to waggle his tail.

Edward English slipped to the ground and the others followed. Neal shook hands with both of them, noticed the look of warmth in Faun's eyes, and wondered a little at the perfectly sane expression of worry on her face.

"Be careful of Freeze and Fitch," she warned. "They may act friendly at first, but they're both insane."

Mason shook his head gravely. The pair couldn't be any worse than the things he had already seen in Planta. No one could be sane and live happily in this place.

"Follow the trail," English said. "It will lead you directly to the gate."

Mason stared at the beaten path through the grass.

"But it seems to circle the city," he protested.

"I know," English explained patiently. "Everything goes backward in Planta, but you'll reach the city by following the path."

Mason watched with a queer, lost feeling as the pair mounted Dina-Mo and went back toward the cliff. Then he turned and walked swiftly along the path.

THE city was surrounded by huge walls. At least this much wasn't futuristic. There was a deep, dry moat and a bridge that led across it. Mason trudged over the bridge and through the gate. Inside, long straight streets led directly toward the heart of the metropolis. The streets were smooth and hard as glass. The buildings, with

no sign of life showing any place, looked like huge markers in a crazy sort of grave-yard. Above him thousands of feet in the air, the towers were interlaced with translucent highways that hung suspended without visible support. The sun sent thousands of colorful reflections darting about in every direction.

Mason took a deep breath and walked straight into the heart of the deserted city.

He walked about half a mile, still marveling at the perfect architecture, when he noticed a small, three-wheeled vehicle moving rapidly toward him. It resembled a common bicycle with a side car. The thing rolled abreast of him, and a man with a huge paunch nodded pleasantly and continued to roll by. His companion, a scrawny hairless individual, also ducked his head toward Mason and continued to stare straight ahead.

"Hey," Mason shouted, "aren't you Freaze and Fitch?"

The bicycle stopped abruptly and two heads jerked around to stare back at him. The big man who pedaled the bike stepped off the seat and placed his hands on his hips. He was the largest man Mason had ever seen. The stomach rolled down almost to his knees. His cheeks were puffed and red. He wore a tan shirt, brown knickers and a golf cap.

"I'm Freaze," he thundered. "What do you want?"

The little man in the side-car climbed out stiffly and edged to Freaze's side. He also wore knickers, and his bare, bony knees looked like two baseballs balanced between broomsticks.

"Yes, and I'm Fitch," the little fellow said frostily. "What do you want?"

Mason sighed. He had to go all over that again.

"Don't you ever speak to visitors?"

he asked. "I came here to talk to you."

It seemed to dawn on Freaze suddenly that a stranger had entered their city. He moved toward Mason slowly, his belly rolling from side to side as he walked.

"Fitch," he called. "Why didn't you remind me that we were supposed to be all alone here?"

Fitch bowed his head.

"I'm—I'm afraid it never occurred to me," he admitted sheepishly.

Freaze bristled.

"See that it does in the future," he warned. "Why, this man may be a spy."

He surveyed Mason carefully.

"What are you doing in Boston," he asked.

Mason gulped.

"Boston?"

Little Fitch chuckled.

"He doesn't know our game," he said. "You see, we both came from Boston. It's a little less lonely if we pretend *this* is Boston. Now, if you came from Chicago, or somewhere else, you can call it whatever you wish. It's really been here too long to care what you call it."

Mason wished he had stayed in the comparatively sane home of Edward English.

"No," he said as pleasantly as possible. "Boston is good enough for me."

Fitch seemed vastly relieved.

"We thought it was a nice name," he agreed. "But, why are you here?"

"Yes," Freaze interrupted in an angry rumble. "It's a good thing we discovered you."

"But I discovered you," Mason protested. "You see, I was in a plane accident."

HE explained hurriedly what had happened. Neither of them in-

terrupted until he finished. Then Freaze came closer to him. There were tears in Freaze's eyes. He put a massive hand on Mason's shoulder and squeezed.

"Tough, old man," he said. "But who told you we could help?"

"Some people I met up on the cliff," he admitted. "A Mr. English."

Fitch shuddered.

"Don't ever mention his name again," he pleaded.

"No," Freaze echoed. "The man's quite mad. We couldn't live with him. Now, about escaping from Planta. It's quite complicated. You see the insects captured our air machine, and we can't get it back again."

His companion started to sniffle loudly. He wiped the tears from his cheek.

"We worked so hard to build it," he said. "And the ants can't fly it. I don't know why they insist on fighting with us all the time."

An idea occurred to the ponderous Freaze.

"This isn't being very hospitable to our guest," he said suddenly. "We are just out for an airing. Let's go back and have breakfast."

THE building in which they lived was a small, stone affair fitted out with unreasonable reproductions of a Boston home. Nothing seemed to work, but an hour later Mason found himself comfortable and full of hot coffee and beans. Beans, it seemed, were another earmark of Boston living, and he learned later, the only dish that Fitch had ever learned to cook.

The pair seemed harmlessly crazy, and as yet had shown no signs of violence. Mason decided to accept their hospitality until some method of escape from Planta presented itself.

With them, he made a tour of the city and felt himself more and more

awed by the places. At last they escorted him eagerly into a vast room below the level of the street. Through an inner door he could hear the hum of huge machinery.

Freaze was in the lead as they entered the room filled with humming dynamos. Mason's eyes bulged. It was the highest power house he had ever seen. Below, the dynamos turned smoothly, and in the air above, a mass of gears and wheels spun at great speed, driving hundreds of twisting, turning blades. It looked like a factory of some kind, but what would be manufactured here, he couldn't guess.

With his hosts Mason circled the room, realizing at last that he was witnessing something quite sane. There was nothing unbelievable about this place. He had never seen anything so well cared for. The men must, after all, be geniuses to manage this alone. He turned to Freaze and saw that the big man's face was glowing proudly.

"You manage to keep this in perfect running order."

Freaze nodded and his eyes glittered.

Mason sighed.

"To think that I suspected you fellows were nuts. This must be something left behind when the future civilization left. I'd like to have the plans for reproducing it. I've never seen anything so awe inspiring in my life."

Little Fitch squeezed his arm and Freaze nodded.

"We made it ourselves," he admitted modestly. "It took a long time."

"But—that seems impossible."

"It isn't," Freaze assured him. "I'm quite clever at such things. We pondered over the design and changed the machinery that was here to fit our own specifications. It works perfectly."

Fitch shook his head in a bewildered manner.

"At least, we think it does," he offered humbly. "You see, we can't be quite sure, because we've never been able to make bread."

"Bread?" Mason's cheeks started to burn. He felt it coming. He placed both legs apart carefully and adjusted himself for the shock.

"What," he asked in choked voice, "has bread to do with it?"

Freeze looked genuinely stunned.

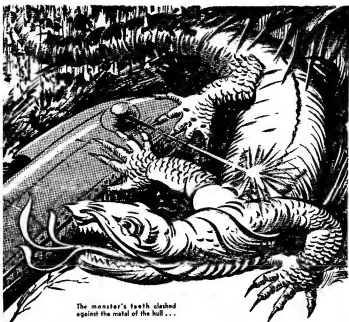
"Didn't you know?" he asked in a shocked voice. "This is our own design for a bread slicer."

MASON studied the fire for a long time, staring at the freshly lighted

logs with deep concentration. One thing remained for him to do. He must escape from the valley, and do it before his mind was lulled into accepting the insane things he had seen.

He wondered if, in some ways, Planta with all its backward movement, wasn't preferable to a world torn asunder by war. Was there anything more insane than a group of countries fighting for peace, yet putting all their effort into producing death? Was Hitler any more sane than these men who sat with him in the upsidedown world of Planta? He stared at the pinched, skinny figure





The monster's teeth clashed against the metal of the hull...

of Fitch, then across the room at Freaze as the big man arose and added another log to the fire.

"Is there any chance of getting your air-ship away from the ants?" he asked.

Fitch opened one eye, regarded him without any particular expression and closed it again. Freaze seemed more inclined to talk.

"I'm not sure," he admitted. "We thought it over this afternoon, and we're making arrangements to try. We had some business to attend to first, but it's taken care of."

"Business?"

"English," Freaze said. "You probably thought it odd that we were prowling about so early this morning. When

we met you were just returning from the prison."

Mason jerked erect. English? Prison?

"You—haven't seen English?" he asked suspiciously.

Freaze chuckled and Fitch said, with his eyes still closed:

"We captured English and his daughter this morning after you left them. That story about the ants getting our air-ship was phony. Do you think we're crazy?"

Mason was about to answer in the affirmative, but he felt it wiser to remain silent.

"We picked them up in the ship and they are quite comfortable in prison,"

Freaze said moodily. "The girl will be handy to have around the house. I'm sick and tired of Fitch's beans and biscuits. I don't know *what* we'll do with her father."

Fitch's left eye flickered open.

"There's always the bread slicer," he suggested.

Mason shuddered.

"Yes," Freaze agreed. "We haven't tried it out yet. Something like the old melodrama of the villain in the saw mill."

THEY were silent for a long time.

Mason, not knowing what else to do, continued to stare into the fire. These two weren't so harmless after all. They had put Faun and her father in prison somewhere in the city.

He heard Fitch stir in his chair, but did not look at the scrawny man. At last Freaze's voice disturbed the silence once more.

"Did you feed the grasshoppers, Fitch?"

Fitch groaned.

"And how is the volcano growing today?" Freaze asked.

Fitch opened his eyes with an immense struggle.

"Oh for Heaven's sake, leave me alone," he begged. "The grasshoppers have eaten one of English's cave-men and they are content for the night. The volcano is growing well. Now, can I go to sleep?"

Mason wished *he* could go to sleep. Grasshoppers and volcanos? Would it be possible for him to make sense out of that combination? He'd have to try.

Although conditions in general weren't very clear, Neal Mason knew that it was his duty to help English and his daughter. It had been their trip here that trapped them, and he was responsible. After an hour the room grew

very quiet. The fire died down, and Freaze and Fitch snored loudly. Even in their sleep they were perfect partners. Fitch caught the high, falsetto snores and carried them down to Freaze's deep, bass notes. Mason knew he didn't have a chance to help Faun and her father as long as he remained in the room. What better chance did he have, if he escaped?

His knowledge was confined to what they had shown him. One thing was clear. He'd stand a better chance to move freely once he had shaken this pair of madmen from his heels.

Mason stood up cautiously, yawned and stretched with both arms above his head. The action was casual, and neither man moved. The snoring dominated the room. Mason walked quietly to the door, out into the hall, and moved cautiously toward the street. Once outside he started to run. When a few hundred yards separated him from the sleeping pair, he paused in a doorway and caught his breath.

Now he could understand why Freaze and Fitch didn't get along well with Edward English. Faun's father might be nuts, but at least he was harmless. His new hosts had spoken casually of putting English into the bread slicer. Mason shuddered. It was pretty obvious that Faun's end would be no more pleasant.

Mason didn't know one street from the other in the dead city. He moved a few blocks away from the house and paused to take stock of the situation.

He could return to the cliff and get Adam's friends to help save English. But, could he find his way to the cliff alone? And, if he did so, would there be time? Freaze and Fitch would discover his absence sometime between now and morning.

The dead city was lighted partially by a glowing red that tinged the sky.

The color seemed to grow strong, then fade again, as Mason watched it. A slight rumble shook the earth. It seemed to come from some spot near the outside wall.

Drawn by curiosity, Mason made his way toward the sound. He had walked half a mile, and the light grew brighter as he moved toward it.

At last he came to an open space between two tall towers. A small building had caved in, and the pit was filled with fiery, red lava that boiled up to the surface. The heat was terrific.

Mason paused. He remembered Fitch's words:

"The volcano is growing nicely."

Fitch's words made sense. Mason was witnessing the birth of a volcano. Lava spewing over the edges of the pit, was building up a wall already three feet high. Mason knew that the most powerful force in Planta was not the few human beings who had come here. The bellish force of the place would be blamed on a small part of logic that had gone hog-wild. The strange valley contained all that was old and new, and a few things that even cold logic could not unravel.

HE WAS startled by a loud snort behind him. Mason pivoted and a chuckle escaped his lips.

"Mo!"

Dina-Mo looked ludicrous standing there in the dim light, his tail thumping the surface of the street. With the light of the newly born volcano on Mo's face, the dinosaur looked like a dragon. Mason shivered. He hadn't seen a dragon yet. Perhaps he still had that little surprise in store for him.

Then the meaning of Mo's presence dawned upon him.

"The girl," he asked forgetting that Mo couldn't talk. "Where is she?"

Mo seemed to sense what Mason

wanted. He turned and lumbered away sedately. The street shook beneath him. Mason followed at a fast walk, careful to stay out of range of Mo's tail. He hurried down the street after Mo who seemed to know just where he was going.

At last Mo halted and pushed his neck through the entrance of a large building. The dinosaur tried to heave his vast bulk into the hall, but a few bricks fell and he remained wedged. While Mo was in the way, Mason couldn't get in himself. He had no doubt now that Faun and her father were somewhere inside.

He went as close as he dared to the tail, and kicked it gently with his boot. Mo hacked out, staring down at Mason with hurt expression. Mason dashed past him into a dark hall. Inside, he could hear nothing. Mo's head came back through the door and stared at him expectantly. The long neck swished through the darkness and indicated that Mason should follow the stairs that led downward. Mason hurried across the lobby and down the steps at which Mo pointed. It was even darker below the street level. He moved cautiously and at last reached a basement.

Somewhere ahead of him in the long hall, he could see a light. He ran toward it. There was a small door at the end of the hall. The light came through a small barred window. Thoughtlessly, Mason threw the door open and stepped inside.

Fraze and Fitch were seated calmly on a long bench at one side of the cell. On the other side, Edward English and his daughter sat on the floor. From their expressions, Mason knew he wasn't alone in his grief for pulling a blunder.

Fraze drew a long barreled gun with a huge handle, and pointed it gravely

at Mason's chest.

"We've been expecting you," he said. "Rather inconsiderate, getting us up in the middle of the night."

"My goodness, yes," Fitch chimed in. "Now you've spoiled everything. We'll have to slice you and English at the same time. Quite bloody, don't you think?"

Neal Mason was blind with anger. He owed a lot to the pair who were held prisoner here. More than he could pay back if he didn't make a break soon. He forgot the pistol that Freaze pointed at him. He forgot his personal safety in an attempt to help Faun.

"You dim-wits," he shouted. "Now I'm doing the talking. We're going out of here, and we're leaving right now. If either of you try to stop us, I'll . . ."

Freaze had turned to Fitch, as Mason shouted. Fitch winked and nodded his head calmly. Mason tried to dodge, but it was too late. Freaze lifted the pistol and a blast of fire exploded in Mason's face. He heard Faun scream with fear, and felt as though his shoulder had suddenly shrivelled and fallen off. Then the whole building seemed to shake above them, and the walls started to crumble.

"Quick, outside," Fitch shouted. "The volcano."

He knew that they were running, and that Faun was kneeling at his side. Then the pain in his shoulder became unbearable and he passed out.

"WE HAD quite a time of it, sir," Mason heard the soft cultured voice close to his elbow and opened his eyes. His head ached badly. He saw Adam and Eva sitting close to each other. They were staring across the table at Edward English. Mason closed his eyes and sighed. He was safe again.

"I asked several men to help me." It was Adam's voice again, droning

along smoothly. "We entered the city just as the volcano erupted. Only a minor eruption, but it shook things up badly."

"I know," he heard English say. "The building from which you rescued us crumpled just after we escaped. I think the American is all right. I'm worried somewhat about Faun. She was struck on the head by a flying brick."

Mason's eyes flew open. He struggled to one elbow.

"Faun—hurt?"

English turned to him gravely.

"Yes. She's still unconscious. I'm afraid the blow might effect her mind."

Mason realized at this moment just how much the girl really meant to him. He didn't care if she was sane or crazy, he wanted her to recover. Wanted her to know how much he cared for her.

"I'm glad that you're feeling better, sir." Adam arose and rambled over like a huge wolf, to arrange the dressing on Mason's head. "Freaze and Fitch escaped, but my men managed to get you back safely."

"But the volcano?" Mason asked. "What happened to the city?"

English chuckled.

"The city is still there," he said. "Although I wish it wasn't. The volcano is only a small one. It started last night and is growing swiftly. It may cause trouble sooner or later, but at present it topples a few deserted buildings to the earth and subsides."

"May I see Faun now?" English nodded.

"She's in her room," he said. "Eva, will you . . .?"

Eva gathered her ponderous legs under her and stood up.

"If you'll follow me, Mr. Mason?"

Mason wasn't too sure of his legs. He walked slowly, following the huge Eva down a short hall and into Faun's

room. Mason stood in the open door, staring down at the girl on the bed. Eva hovered over the girl for a minute, then retreated and closed the door behind her. Mason went to the side of the bed and bent close to Faun's face. She was breathing evenly, eyes closed, one soft arm stretched above her head on the pillow.

She looked so helpless that Mason wanted to pick her up and ride away on Dina-Mo to a place where they could never be found again. He placed his hand on her arm and she stirred in her sleep. Her lips parted.

She was regaining consciousness.

Mason rubbed her wrist gently and watched as the wide eyes opened and stared up at him. She rose weakly on her elbow and stared around the room. Then her eyes returned to him, and her pupils dilated with fear.

"Who are you?"

Mason gulped. Good Lord, had she lost her memory?

"Faun," he said gently. "Don't talk. Don't tire yourself. You're very sick. You need rest."

The fright didn't leave her face. She shrank back, drawing the covers close to her.

"Who are you?"

"Mason," he said patiently. "Neal Mason. Perhaps I'd better call your father."

He started to leave, but she grasped his hand tightly in her own and held on.

"Why did you call me Faun?" she whispered.

Mason shuddered. It was worse than he thought.

"I'll call your father at once," he said. "He'll explain."

The girl continued to hold him tightly.

"Don't go, Neal," Her voice was suddenly tender. "I can't imagine why you act so queerly. After all, you have

every right to be here."

MASON could feel it coming. By now, he sensed the things that were to happen in Planta. They were always twice as bad as he thought they would be, and his mind told him to prepare for a shock.

"Mrs. Neal Mason," the girl said dreamily.

Mason's body grew tense. Had he heard correctly?

"Mrs. Neal Mason," she repeated solemnly. "Neal, dear, you can't pretend you don't know me. We've spent so many happy hours in Buffalo."

Mason felt the hair prickle on the back of his neck. He drew away as far as he could, not daring to force her hand from his arm.

"Faun," he said. "Faun, for God's sake, stop the raving, will you?"

She didn't seem to hear him.

"It's wonderful to be with you again, Neal." Her voice was romantically tender. "We have had so much fun together, and I'm looking forward to doing it all over again."

"Doing what?"

"Riding in the harrel," she said wistfully. "Over Niagara Falls in a barrel."

Her eyes closed and a pensive smile lighted her face.

"Thank God," Mason said thoughtfully. He watched her fingers relax and slip from his arm.

He left the room quietly.

"MY DAUGHTER suffers under the delusion that you are her husband," Edward English said sternly. "It is your duty to discourage her in every way."

Mason stared out over the valley toward the dead city. It was close to night and shadows played across the spires until the whole scene seemed like something out of a dream. He

thought of Faun's suggestion that they spend their happy hours going over Niagara Falls in a barrel. The idea didn't appeal to him.

"I'll do everything possible," he promised. "Just what *is* wrong with the girl?"

English acted surprised.

"Nothing," he said, "other than this foolish idea that she has had since the accident in the city."

"But Planta—the animals here—the way various people react? Surely you don't claim Planta and its inhabitants are all sane?"

Edward English bristled visibly.

"And just what have we done to suggest that our minds aren't sound?"

Mason remembered something he had heard in college. When a person is entirely sane, he sometimes worries about going crazy. Actually, the very fact that he worries about it is a pretty good sign that he is normal. On the contrary, the person who never doubts his own soundness of mind, is perhaps moving in the wrong direction. For example, he thought, I've seen a Napoleon at the state institute who never for an instant doubted that he personally fought Wellington at Waterloo.

English was like that. To him, the valley was a normal place. Therefore, English himself couldn't even stand Mason's reference to the subject. Mason wondered dully if there was any way of curing the girl.

"I suppose you haven't discarded your plan of escape from Planta," Edward English asked almost too eagerly.

"No," Mason admitted. He wondered why English had been so anxious for him to stay before. Now he seemed ready and willing for him to get out speedily.

"I'm glad," English admitted. "You aren't safe now, because Freaze and Fitch will try to kill you again. I think

I can lead you to their air-ship. I know something of its motors as I helped design them. I'll do everything possible to help you out."

Mason wasn't listening. In the direction of the dead city the sky started to glow an ugly red. The volcano was building itself higher, starting to throw out its nightly barrage of lava and flame.

The ground rumbled slightly and the sky grew bright.

"That volcano is going to cause plenty of trouble," he said. "You may feel the effects of it here sooner or later."

English chuckled.

"Freaze and Fitch will get a hot-foot," he said. "The volcano will never be large enough to effect us."

As he spoke, Mason could see the distant rim of fire growing higher into the air. Last night it was a few feet above ground. Now it had risen until even at a distance, the rim seemed dozens of feet in the air.

"I'd like to start as soon as possible," he said. "If we could reach that air-ship tonight, I'd get out of here and stop imposing on your hospitality."

English was visibly pleased with the idea.

"No hurry," he said. "We will wait until morning."

Mason grimaced in the darkness. English wasn't in a hurry, but he intended to see Mason out of the valley before another twenty-four hours passed. Mason didn't mind much, except for Faun. He lay awake a long time that night, wondering about Edward English's charming, slap-happy daughter.

WHEN morning came, it seemed almost impossible to venture into the valley where Freaze and Fitch had hidden their machine. Mason awoke early and went out to the lodge that

overlooked the valley.

Nature had gone mad again. The sky was filled with bits of flying pumice and the sun was blotted out almost completely. In the dimness of the valley he could see the faint outline of a huge mountain. The top of the mountain was seething with molten rock. Lava flowed steadily over the rim of the huge crater, and spread out below.

The volcano had grown to full size overnight.

Mason turned toward the cave to arouse the others, but English was already on his way out.

The man was choking and coughing because of the dust filled air.

"For Heaven's sake, Mason . . ."

English stopped short, staring down at the thing that took place below them. His mouth dropped open alarmingly.

"Talk of a volcano, and there it is," Mason said solemnly. "Everything happens in this place."

The sky was growing black. The steady roar of the growing mountain killed every other sound.

The valley of Planta couldn't stand many hours of this. They would all be doomed.

"But—but I said it couldn't happen," English protested. "It's impossible."

Mason nodded.

"Supposing you go down and tell it," he suggested dryly. "I've seen volcanoes, but I've never watched one being born. Perhaps this is not the correct procedure."

English turned back to the cave.

"We will arouse the others," he said.

"How about the air-ship?" Mason asked. "Weren't you going to lead me to it this morning?"

English shrugged and looked apprehensively into the maw of swirling darkness below.

"Perhaps I'd better take Faun with

us. I'm quite sure we are all safe, but if anything should happen to the valley . . ."

"We might make an escape in the ship," Mason suggested.

English didn't answer. He had disappeared hurriedly into the cave.

THE air was terrible. Mason held tightly to Mo's back, his arm around the girl. English was sitting behind them, trying to pretend the whole thing didn't trouble him. The valley wasn't pleasant, but the air was still clear enough to breathe.

"The air-ship is hidden east of the city," English said. "If Freaze and Fitch haven't already escaped, we will find it there."

Mason couldn't quite understand on what terms he should accept Faun after her declaration of last night. She hadn't spoken since they started. Her eyes darted suspiciously toward her father, then into the semi-twilight of the dust laden air. Her grip on Mason's arm remained firm.

Mo turned away from the trail and started to push his way through dense jungle. For a long time none of them spoke. Then the roar of the volcano stopped and the dust started to settle. The air was better, and they stopped at a stream for a drink.

Toward noon the country cleared and they found themselves on an open meadow. Mason recognized places he had seen when he first came to the valley.

Ahead of them the flash of metal touched by the returning sun caught his eye. English kicked Mo gently on the side and Mo moved forward more swiftly. The air-ship, a bright cigar shaped thing sat on the floor of a small gully. Mason stared with admiration as Mo eased his bulk down into the gully and stopped. The ship was a

dream craft of the future.

"Be careful when you approach," English's voice was low. "They may be here already."

Mason followed him to the ground and helped Faun down. She held his hand tightly and they walked toward the ship. Mo remained where he was, his neck swinging back and forth rhythmically.

English reached the door. He drew it open, then stood there, his expression changing from triumph to deadly fear.

"Freeze!"

The ponderous bulk of Freeze eased out of the door. He held his huge pistol before him, aimed straight at English's chest.

"Step inside, folks," he said in a hearty, welcoming voice. "You walk into more traps, don't you?"

Fitch's voice came from within.

"Come on in Mr. English. The volcano is quite a problem, isn't it? We *thought* we'd meet you here, because we were careful to let you know where the ship was kept."

The three of them stood in the sunlight near the door, watching Freeze's weapon and wondering what would happen next. It took a lot of nonsense to bewilder Mason, but this was the end to all of it. Something in Freeze's eyes told him that Freeze meant to use the pistol, and use it soon.

"LOOK here," Mason said. "I'll see that you all get rewarded for the job of getting me out of there. You haven't anything against English's daughter or myself. How about letting us go."

Freeze's eyes flashed dangerously.

"English's daughter," he hustled forward, pushing English aside. "Faun's *our* daughter, at least as much as she is English's.

Mason felt the girl shrink against him.

"I don't think I understand," he said slowly.

"Then I'll make it clear," Freeze said loudly. "We three left our home together." He pronounced 'our home' haltingly as though seeking the right words. "We stole Faun together and she belongs to all of us. That's fair, isn't it?"

Mason's mind was working a mile a minute. They had kidnapped the girl. Then she wasn't necessarily crazy at all. He thought of the reference Freeze made to 'our home.'

"You didn't escape yourselves, did you?" he asked calmly. "Perhaps from a place with barred windows and high walls?"

Freeze's eyes became cunning. He turned and stared at English. Fitch's thin face appeared at the door of the ship.

"Be careful, Freeze," Fitch cautioned. "He's trying to trap you."

Freeze's gaze returned to Mason.

"He isn't trapping anyone," he said coldly. "Sure we escaped from a place like you describe. They all think we're crazy. We aren't crazy. We like Planta and we understand it. You're going to escape, sure enough. Escape through the door of the ship when we've gone a mile or two above the valley. It won't hurt. You won't even feel the earth when you hit it."

Mason's teeth clicked together tightly. His fists clenched. The girl at his side seemed to understand. She threw her arms tightly around his waist.

"You can't kill Mr. Mason," she said quietly. "He's my husband."

Freeze pivoted toward English.

"Is she married? Is she telling the truth?"

Edward English smiled. He smiled deliberately, as though he had just

played a fine joke on someone and intended to get the full benefit of it.

"Yes," he said calmly. "Adam married them last night. They are man and wife."

Freeze seemed stunned. The pistol hung loosely in his grasp. He turned to Mason and two large tears welled up and dripped down his cheeks.

"Married," he gulped solemnly. "And all the time I had hoped . . ."

Mason wondered what had prompted English to say what he had. There must be a terrible hatred among these men. A hatred that made English's words a gesture of triumph.

Little Fitch stepped out of the ship and walked to Freeze's side. He patted him on the shoulder.

"There, there," he said. "This complicates matters little. We can straighten out everything by killing the husband."

Freeze brightened.

"That's right," he admitted. "Now, if you'll all step inside, we can take off."

IN THE next half hour, Neal Mason had little opportunity to plan escape. Freeze threw him into a small cabin and locked the door. For some time he thought the ship had taken off. He heard the motors roar fitfully, then die down to a smooth hum. The ship rolled over slightly and rocked back and forth.

Then a loud commotion came from the corridor. The door to Mason's cell flew open and Freeze rushed in.

"You'll have to help us." His expression was desperate. "The insects are attacking."

Mason knew enough about the insects to realize that, were they all the size of the ants he had seen, the ship was in for trouble.

Outside the cell Fitch was running excitedly up and down trying to explain

to Edward English how the huge turret-guns were fired. Freeze dragged Mason down the corridor talking excitedly as he ran.

"We are unable to take off. The insects have been trying to break their way into the ship for some time. For a while we were able to keep them away with our side arms. We have two heavy cannon turrets, but it takes two men to load and fire them. We're all in this together, you know."

Mason had no intention of refusing to help. They reached the stern of the ship and Freeze led the way up through an intricate system of ladders into the small turret.

Mason was amazed at what few details he had seen inside the ship. The turret was large enough to hold two men. It swung about swiftly in any direction simply by pressing the turning lever with the foot. Freeze seated himself in the revolving saddle of the gun and drew down the lever that opened the barrel.

"Just watch me, and when I fire, reload from the shell carrier that comes up from below," he howled.

Mason threw a shell into the breach and stepped back. His eyes were on the narrow slits of the turret watching the scene outside the ship. As he watched, the enormous head of a grasshopper reared into sight and felt the impact of the mammoth insect as it came down forcefully against the outer armor of the ship. At that instant, Freeze swore and let go a charge directly into the grasshopper's underside. The thing crumpled up and slipped slowly out of sight.

At the far end of the ship, the other cannon opened up on a monster that was at least the size of the ship itself. The crawling alligator, like a lizard, shot out a tongue that wrapped around the turret and threatened to tear it

from its moorings. At that instant, Fitch and Edward English evidently got their cannon working, because three shots came in rapid succession, blowing the tongue into red, bloody shreds. The lizard backed away and roared in pain. It scuttled into the jungle, leaving broken and uprooted trees in its wake.

HOW long Mason fought, he didn't know. Each moment seemed a repetition of the last. The guns were never cool, and the insect horde swept toward them endlessly.

The giant ants were here and their solid, armored bodies were difficult to knock out. Mason watched the ponderous Freaze closely. Freaze was beginning to wear down under the battle. Finally he had enough. He climbed out of the gun-saddle and turned a sweating, dirty face to Mason.

"This isn't getting us anyplace. Fitch couldn't get the ship off the ground. I'm going to try it. If you can keep the gun going alone, we might be able to break loose."

Mason nodded and took his place in the saddle. Freaze tossed in a shell and climbed down the ladder into the body of the ship. For the next ten minutes, Mason loaded and fired the gun alone. It was a slow, back-breaking job, but it worked.

The insects were drawing away gradually, reluctant to face the death metted out from the two turrets. As he loaded for the tenth time, Mason heard the engines turning over slowly somewhere up front. Then the sound increased to a roar of power and fire shot from the exhaust tanks of the stern.

Now he knew why the insects were retreating. The sky was growing dark once more with volcanic dust. He turned the turret until he could look in the direction of the city. It wasn't visi-

ble. A black curtain hid it from sight, and as he watched, fire shot thousands of feet into the sky, and floated down like bloody rockets.

The ship lurched into an upright position, and before he could grasp the situation, the earth was falling rapidly away below them.

They were flying.

Flying so swiftly that the earth seemed to fade away below at a dizzy pace. Rising above the valley, Mason stared back and thanked his stars that the ship had finally taken off.

Everything below the rim of the cliffs was covered by black, pumice-like dust. Out of the dust, the flames of the volcano roared with increasing power.

Even to the last, Planta had remained true to its history of doing things wrong. A volcano, mountainous in proportions, had been born in a few short days. A volcano in which Nature outdid herself and destroyed the other things she had worked so hard to build.

IN THE control room of the sky ship, Mason, Freaze and Fitch, English and his daughter met for a conference. Freaze acted as spokesman. He was ill at ease, but seemed determined to see that justice was done.

"Fitch and I have been thinking it over," he admitted, "and we've talked with English about it. We think we'll return to the United States and give ourselves up."

Mason, taken completely by surprise, was amazed by Freaze's words.

"But—I thought you were English. That you came from somewhere in England?"

Fitch chuckled.

"We came from Brooklyn," he said. "At least, from a place just outside of Brooklyn. Faun, that's just what we call her, is a nurse. Her real name is Sally—Sally Peters."

Mason turned swiftly to Edward English.

"Is he telling the truth?"

To his amazement, Sally herself answered him.

"He certainly is." She crossed the tiny room and looped her arm through Mason's. "Perhaps I ought to say a few words at this confession party. I was in charge of these three men at the institution. Honestly, Neal, you wouldn't believe it, but they're three swell fellows. I knew they planned to escape, and I just humored them and pretended not to know."

Fitch chuckled.

"She thought we were going to run away where we could be easily caught, but we fooled her. We asked her to go along, and she promised to do it. But when she found out we had stolen an airplane, she got scared."

Mason looked at Sally Peters and the girl smiled.

"They were clever. They took me aboard the plane and I tried to talk them out of the idea. I talked to them for a long time. In fact, until we crashed in Planta."

"But—why did you act so strangely when I was with you," Mason asked. "You could have told me. Instead you seemed as—as odd as they were."

"I know," Sally admitted. "But, I had a job. I had to take care of these three until somehow we could return. I pretended to enter into all their schemes, because I knew they were harmless to each other. But you were an outsider, and if I paid any attention to you, they'd all be angry. I tried to act as I thought they'd want me to."

Edward English chuckled.

"Only a madman can act like a madman," he said. "We thought Sally looked pretty silly. Last night, when I told Freaze and Fitch that you two weren't really married, they flew into a

rage. We all think that you should marry Sally just as soon as we get back." "Back?" Mason asked. "Back where?"

Freaze consulted the instrument panel on the wall.

"Back to the States," he said. "We're about five hundred miles off New York right now."

"But why do you want to return," Mason asked. "It will be safe to leave us and escape before the authorities find you."

Edward English sighed.

"We're tired of wandering around," he admitted. "It used to be so quiet before we escaped."

"So quiet," Fitch echoed.

FITCH, Freaze and English were safely in New York. Mason, with one arm around the girl at his side, the other at the controls of the cigar shaped air-ship, sighted Lake Erie and figured his bearings for the Buffalo airport.

It wasn't officially recorded what reception the strange ship received, but it can be imagined the greeting Neal Mason and his bride got upon landing in Buffalo after the first stage of their honeymoon trip was completed.

Sally Peters, now Sally Mason, waited proudly as her husband greeted friends who had given him up for dead. Then, with the ship in the hands of curious engineers and mechanics, the newlyweds retired to a hotel room overlooking Niagara Falls, and proceeded to forget all about the idea of going over the falls in a harrel.

Neal Mason's return to the airport on the following afternoon can be recorded by reporters who were there at the time, clambering all over the ship and predicting that it was a new secret weapon designed by Mason's employers.

Mason himself had carelessly

dropped the remark that the ship would probably be valuable to the war effort.

To find out how valuable it was, he went at once to the office of the Chief Engineers, and confronted Charlie Waters, the big boss.

Waters was a robust, red faced little man who had designed a dozen fine planes. His expression told Neal that something was wrong before they exchanged words.

"Did you have a chance to look the job over?" Mason asked.

Charlie Waters nodded.

"Well, what's the verdict? At least I brought *something* home to make up for wrecking a good plane."

Waters shrugged.

"Don't let this come as a shock, Neal," he begged. "But if you'll explain to us how that ship works, we'll be glad to copy your plans."

"But it's simple," Mason insisted. "They showed me how to work the controls and I flew it in from New York."

Waters shook his head.

"You, nor any other man, could fly that tin cigar. There isn't a part in it that makes sense. It must have been tossed together by a maniac. I tell you, Mason, it won't even fly.

Mason was getting angry.

"But it did. I flew it myself."

Charlie Waters shook his head slowly back and forth.

"I'm sorry, Neal, but the thing hasn't a single feature that makes sense. If I saw you land in it myself, I'd still claim it couldn't be done. Better go home and stick to flying our crates, Neal. That hunk of junk won't sell for the cost of the metal that's in it."

All of which proves it's the other man who's crazy.

Vignettes

OF FAMOUS SCIENTISTS

By ALEXANDER BLADE

Cavendish

The man who discovered that water was composed of two gases—among many other and more brilliant discoveries in physics and chemistry

HENRY CAVENDISH, English chemist and physicist, was born at Nice, France, on October 10, 1731. He was sent to school at Hackney in 1742 and in 1749 entered Peterhouse, Cambridge, which he left in 1753, without taking a degree. Until he was about 40 he had only a very moderate allowance from his father, but then he was left a fortune which made him one of the richest men of his time.

He was a regular attendant at the meetings of the Royal Society, of which he became a fellow in 1760, and he dined every Thursday with the club composed of its members. Otherwise he had little intercourse with society; indeed, his chief object in life seems to have been to avoid the

attention of his fellows. His dinner was ordered daily by a note placed on the hall table, and his women servants were instructed to keep out of his sight on pain of dismissal.

In person he was tall and rather thin; his dress was old-fashioned and singularly uniform, and was inclined to be shabby about the times when the precisely arranged visits of his tailor were due. He had a slight hesitation in his speech, and his air of timidity and reserve was almost ludicrous. He never married. He died at Clapham on February 24, 1810, leaving funded property worth £700,000, and a landed estate of £8,000 a year, together with canal and other property, and £50,000 at his bankers'. He was buried

in the family vault at All Saints' church, Derby; in 1927 this church became the cathedral church of the new diocese of Derby and it was decided to erect a monument there to Henry Cavendish.

In the department of chemistry Cavendish made the discovery—very astonishing at the time—that water was composed of the two gases, hydrogen and oxygen, which, in his day, were known as phlogiston and dephlogisticated air.

In the department of physics, following a suggestion made by a clerical friend, the Rev. John Mitchell, he devised in 1798 an apparatus which enabled him to determine with considerable accuracy the specific gravity or density of the globe. This consisted of a thin and symmetrical metallic rod, suspended horizontally at its center by a silk thread, and carrying at its extremities two small balls of lead. When this rod came to rest its compass direction was accurately noted with a surveyor's telescope. Directly underneath it was a revolving table or frame, the pivot of which coincided exactly with the prolongation of the suspending thread of the rod. When now larger balls of metal, of known weight and density, were placed on the table, and by revolving the latter, were brought into the vicinity of the small lead balls on the rod, more or less deflection of the latter from its compass position occurred, due to the mutual attraction, and the amount of this deflection was easily measurable. With the data so supplied it was possible to compute the attraction that would be exercised by a mass the size of the earth, and thus determine its density. The figure worked out by Cavendish was 5.45, which is slightly below that of later investigators. The accepted figure is 5.59.

The meaning of this figure is that the earth weighs 5.6 as much as it would weigh if consisting entirely of water. Knowing its shape and dimensions, and the weight of a unit of water, it is a simple matter to arrive at the conclusion that its total weight is in the vicinity of 141,000,000,000,000 tons of 2000 pounds each.

It has been estimated that the outer crust of the earth—say the outer 20 to 25 miles in depth of its substance—has a density of about 2.5. If its density as a whole is 5.6, it follows logically that towards the interior the density must gradually or suddenly increase, to compensate for its comparatively surface lightness. Hence, it is believed that the core of the globe is a mass of metal which, at the exact center, probably has the density of the heaviest of them, uranium, which is 18.68. From the varying rate of transmission of the vibrations of earthquake shocks around and through different sections of the globe, Professor Weichert has concluded that the earth's core is a mass of metal 3580 miles in diameter, and of about the weight of iron or steel, surrounded by a stone shell some 930 miles thick, around which is a molten liquid or plastic layer of about 166 miles in thickness, extending within

20 miles or so of the surface.

Cavendish's scientific work was wide in its range. The papers he himself published form an incomplete record of his researches, for many of the results he obtained only became generally known years after his death; yet the Institute of France in 1803 chose him as one of its eight foreign associates.

His work on electricity, with the exception of two papers containing relatively unimportant matter, remained in the possession of the Devonshire family until 1879, when the papers were edited by James Clerk Maxwell as the *Electrical Researches of the Hon. Henry Cavendish*. This work shows that Cavendish had anticipated the researches of Coulomb, Faraday and others. He investigated the capacity of condensers and constructed a series of condensers with which he measured the capacity of various pieces of apparatus using the "inch of electricity" as the unit of capacity. He discovered specific inductive capacity and measured this quantity; he showed that electric charges are confined to the surface of a conductor and that the inverse square law of force between charges holds to within 2%. Cavendish introduced the idea of potential under the name of "degree of electrification," in a paper published in 1771, under the title "Attempt to explain some of the principal phenomena of electricity by means of an elastic fluid." He investigated the power of different substances to conduct electrostatic discharges and completed an exhaustive enquiry which amounted to an anticipation of Ohm's law.

Cavendish took up the study of heat, and had he published his results promptly he might have anticipated Joseph Black as the discoverer of latent heat and specific heat. He published a paper on the freezing point of mercury in 1783 and in this paper he expresses doubt of the fluid theory of heat.

Other publications of his later years dealt with the height of an aurora seen in 1784, and an improved method of graduating astronomical instruments. Cavendish also had a taste for geology, and made several tours in England for the purpose of gratifying it.

A life by George Wilson, printed for the Cavendish Society in 1851, contains an account of his writings, both published and unpublished, together with a critical enquiry into the claims of all the alleged discoverers of the composition of water. Some of his instruments are preserved in the Cavendish Physical Laboratory at Cambridge, which was built by the 7th duke of Devonshire.

The remainder of Cavendish's papers were placed at the disposal of the Royal Society by the Duke of Devonshire. In 1921 the previously published work, together with a number of unpublished experiments appeared under the title: *The Scientific Papers of the Honourable Henry Cavendish, F.R.S.*

TWIRL MY TURBINE, MAN ALIVE!



There was a tremendous roar and all hell broke loose

**By OMAR
GEER**



**IT WOULD seem that travel
to the planets is only a matter of
motive power—and here was the power!**

AT A technical supper, several years ago, the conversation turned to the subject of gas turbines, and from there, to rocket-ships. Some of the younger engineers seemed to be lieve that perfection of the latter would almost inevitably lead to space-travel, and an argument arose over the feasibility of attempting such transportation even if suitable motive power should be discovered.

An elderly gentleman from Mid-West Utilities puffed on his cigar in amused silence, and then addressed a colleague

who had been snorting to himself about the "nonsense" under discussion.

"Speaking of turbines, do you remember the experimental turbo-generator set that we bought from Hamburg in 1927? No? Well, it wasn't given much publicity, so I wouldn't be surprised if I am the only person well acquainted with that case."

Silence crept around the table, and the old engineer began his tale.

WE NEEDED a central station for South Chicago and Northern Illi-

nois that could supply cheaper power than the scattered local plants, and spent considerable time with consultants and design men trying to pick out the proper installation. It was suggested that we look abroad for one which might possibly be more economical. We found that *Deutsche Waffenfabrik* had been experimenting with steel that would stand up under working temperatures of over 1000° F, without perceptible creep from loads of several tons per square inch.

When material with these characteristics was made available, naturally one of the first applications was for construction of boilers and turbine casings. Since there was nothing particularly urgent about our needs, we sent an engineer and a metallurgist to Europe to make an investigation. They reported that a rather remarkable radial-reaction turbine had been constructed under Jungström-Schmidt patents, and that the first five test models had averaged 200,000 kw. output with an engine efficiency of 94%!

If you consider this an impossibility, remember that the steam entered the turbine header at 5000 p.s.i. and about 1250° F. Yes, that's what I said, and if you want the details of the construction, I believe the *Swiss Engineering Bulletin* carried a report on that model.

We placed an order through one of our customers who had subsidiary duty-free trade agreements, and found that either two turbines or one turbine with two generators were available, but not the two complete sets that we wanted, so we ordered one boiler and two turbines from them, and sent a man to Westinghaus to order the rest of our equipment.

It was six months before our first turbine arrived, with the boiler and fittings, and we set up the plant in Waldham Park near the creek. Our first pair

of generators hadn't come yet, but we set up the boiler and turbine. The latter had been designed for vertical operation, and we placed the condensers in a pit beneath it, diverting the flow of the creek through them, and discharging into the city system.

It was necessary to warm up the turbine for at least a week during installation to get the mounts adjusted for such a large unit.

ON THE night of January 4, 1928, when I turned the plant over to J. A. Nemq for the night shift, the monstrous turbine was humming calmly in its bed, encased in its thick asbestocement insulation. I had a room in a hotel, about three blocks from the Park, and at 4 o'clock in the morning I was awakened by an explosion which broke my windows, and nearly knocked me out of bed. When I reached the plant, a few minutes later, I found the turbine gone, the boiler a hundred yards down the creek, and nothing left of the plant but the heavy concrete foundation with the erection girder frame standing over the steaming condenser pit.

By dawn, when the heavy clouds of steam and coal dust had cleared, a thorough search was made, but not the slightest trace was found of either the turbine or poor J. A. The three operators who were on the night shift with him were found unconscious up the creek, where they had gone to find out why the flow of the creek had decreased. When they recovered, they said that the condenser pressure had gone up considerably because an unprecedented freeze had reduced flow in the creek.

In view of later occurrences, I'm inclined to think that this is what happened: As the temperature in the condensers rose, the pressure went up too, and the expansion of the steam in the turbine soon dropped off. The steam,

however, kept on coming, pumped by the blades of the whirling rotors, whose tremendous inertia kept them spinning on their bearings. Seeing what was happening, J. A. must have turned up the coal burners to fuse the tubes, and closed off the steam and water lines, since he couldn't find the manual blow-off valves, and the action of any sort of automatic safety valve would have to be hastened. Evidently the latter were non-existent, for the condensers soon carried a higher pressure than the boiler.

As the rotors slowed down, the condensers blew up under the turbine, slugging water around 1200 degrees back through the turbine, where it piled up in the large header, and jammed the balance piston back into the intake valve. Since no pieces of the casing were found, it must have been blown straight up, guided by the erection frame which towered for fifty feet above it.

Do I know where it came down? Yes, I was fortunate enough to be on the spot. The turbine broke into the fourth level of a tin mine where I was installing new power and air equipment.

Oh no, I wasn't working on two jobs at once. I had left the States, and was in Java in June, 1930, which was where and when I next met our turbine.

No, I'm not hinting that the 20-ton unit took two and a half years to fly half way round the world, I'm telling you it left the world completely! My reason for believing this, is the fact that the turbine rotors were still spinning, and some cool, low-pressure steam was drifting from the exhaust tubes when I

went a mile underground to look at it.

The only explanation I could devise for this phenomenon is that the superheated water in the header supplied steam to the turbine after it was blown out of the plant, and the return flow exhausted it at high velocity from the bottom of the turbine, giving the unit tremendous acceleration and allowing it to escape the Earth's gravitational field. The intense cold of empty space gradually froze the exhaust steam into a solid plug in the tube, which wasn't covered with two feet of asbestos cement like the rest of the unit. Prior to this time, the spinning of the rotors provided a gyroscopic action which kept the unit pointing straight "up," but now it must have floated around the Earth at some distance beyond the moon.

About two years later, it started falling toward the Sun, and the tremendous heat melted the ice on the exhaust and probably superheated the steam in the header, whose contents of several cubic yards of water were still more than half there. As the unit accelerated, the rotor action stabilized it on the tangent to its path, and it shot past the Sun, to return to me in Java, which part of Earth is nearest the Sun at that time of year.

Yes, it was the same turbine, because the insulation I had plastered on it, and which had kept it from being fused by the heat of Sun and atmospheric friction, was found in the top of the hole it made when it entered the mine. And if J. A. was standing on the exhaust valve when the explosion occurred, he must have been the first man to leave the Earth on a rocket!

MYSTERY OF LEMURIA SOLVED?

Beginning with "I Remember Lemuria!" (see page 12) this magazine will present the most amazing series of stories of Lemuria ever published. The "true" story of a man who possesses what science calls racial memory. Judge for yourself how true they are. Some of the things you read will stagger you!

READ THE LEMURIAN REVELATIONS IN THIS AND COMING ISSUES!

THE FIRST HUNDRED YEARS

By **CONSTANCE R. DOWD**

I DON'T suppose Sir Arthur Eddington cares if through his fault I have insomnia. Being an astronomer, he will doubtless consider that such an ailment provides me with an excellent opportunity to study the Milky Way and beyond, familiar territory to him.

In the chapter he has contributed to Harlow Shapley's delightful book, "A Treasury of Science," Sir Arthur shows himself to be completely at home among galaxies and spiral nebulae. He speaks with authority of 300 million light years, and I do not dispute his figures; and of temperatures of about five million degrees centigrade, and I am entirely willing to drop so hot a subject.

However, when he brings the back of my head into his calculations, that is different. For one thing, momentarily I understand what he is talking about.

Space is spherical says Sir Arthur. "If you go straight ahead in any direction, you will return to your starting point. So if you look far enough in any direction and there is nothing in the way you ought to see . . . the back of your head."

To me, this appeared a remarkably diverting idea. I could fancy myself speaking to a woman in front of me in the theater. "Please remove your hat, madam. You are impeding my view of the back of my head." Of course, she would not be the only impediment, but she would be the nearest one.

A lawyer might argue to the Court. "My client, your honor, is a reasonable man. He seeks for several good rea-

sons to have the defendant tear down the spite fence he has erected. It deprives my client of light. It interferes with the free passage of air over his estate. But chiefly, it takes away from him without due process of law his inalienable right to observe—when other conditions are favorable—the conformation of his own cranium."

On top of Mount Everest, a barber shop might thrive. "Here, without mirrors, watch us cut your hair to your own satisfaction. Stocking caps, however, must be removed. The management is not responsible for the untimely arrival of snow, or of dust in interstellar space."

THUS I went on thinking that at last astronomers were on the threshold of something really big. The ability to see behind while keeping eyes to the front would be of inestimable value in war as well as in peace, a secret weapon that would cost the taxpayer nothing.

With my blood hissing in my veins from pure excitement, I picked up my reading of Sir Arthur again. "So if you look far enough in any direction and there is nothing in the way you ought to see the back of your head. Well . . . not exactly, because light takes at least 6000 million years to travel round the universe and your head was not there when it started."

"Well . . . not exactly—**V** I should have known. There it was—the fly in the ointment, the monkeywrench in the stratosphere. I could hear Sir Arthur laughing, "6000 million years—at least

YOU GET NOWHERE

SPACE is curved, so they say! Will astronomers ever succeed in seeing all the way around?



haw-haw-haw, at least ho-ho-ho." If after his first tantalizing prediction, he planned to cause such a cosmic disappointment, he might have omitted the extra emphasis.

From the moment I read his words I became a victim of insomnia. I could not lie down on my pallet without in my mind's eye seeing a ray of light flash round space. Always in its journey it touched a black ball that bobbed into sight and disappeared at once. And I knew that was my head.

This went on for some nights while I tossed and turned and sought some way to justify Sir Arthur's assertion that by looking far enough in any direction I could see the back of my head.

At last, I reasoned the matter out. My head was not there when light started. Well, I argued to myself after making sure, my head is here now. Why not begin with the present? Suppose I commence looking in one direction into the void now? But, no. I soon realized this would not do either. If I lived to be seventy, eighty or even a century old, my gaze would have completed only a tiny segment of a circuit of the universe before death closed my eyes.

At this point in my investigations,

sleeplessness became torture. I was racked with it for interminable weeks. But at length understanding came. The trouble, I concluded, is not with Sir Arthur's conception of the universe, but with the life span permitted to the human race. The first hundred years you get nowhere. We need 6000 million years for the accomplishment of this project.

Impossible? Why impossible? I answered myself. Man's life expectancy is growing. Barring accidents or disaster, and with the aid of science, man might live to an unpredictably old age. At least, I said determinedly, I will assume such a possibility.

THAT night I closed my eyes and put myself in the right frame of mind. Tonight, I murmured, I am going to live 6000 million years and demonstrate what can be achieved in such a period. Mentally once more I looked into space and my gaze began to traverse it with the speed of light. It whizzed through the Solar System, on and into the Milky Way, through galaxies of stars of the existence of which no man knows. Centuries fled behind my glance. Three thousand million

years and it was half way, rocketing through wheeling coils of stars, half blinded by the light of enormous suns, squinting at millions of worlds, slashed at by comets but unwavering still, on and on while ages poured behind, back through the crowded Milky Way, past the sun again, the moon—Then—then I saw it. The back of my own head. It was bald except for one snowy lock over my left ear, but I recognized it by the depression shaped like a footprint that I have at the base of my skull. The back of my own head. At last. Sir Arthur was right. With 6000 million years of life and no obstacles in the way, it could be done. Smiling, I fell into deep, dreamless sleep.

Yesterday afternoon, I woke feeling fine. Sir Arthur Eddington's pronouncements could trouble me no more. I ate a hearty supper of soy beans and oleo, took a friendly glance at the stars, and settled down to progress a little farther in "A Treasury of Science."

As luck would have it, the book opened to the chapter by Sir Arthur Eddington, and I read again a section I had read before but words that now took on a new and terrible meaning. "The remarkable thing that has been discovered," he says, "is that the galaxies (beyond the Milky Way) are running away from our own galaxy . . . they are also running away from each other. . . . For reasons which I cannot discuss fully we believe that along with the expansion of the material universe there is an expansion of space itself."

The universe, in other words, is **GETTING BIGGER AND BIGGER.**

"The nebulae," he remarks casually, "will recede to double their present distances in 1300 million years."

For a moment I couldn't grasp what I was reading. Then the awfulness of my dilemma struck me. I have been

fooling myself. 6000 million years is not enough for me to see the back of my head, for anyone to see the back of his head. Even as I fling my glance through space, space itself is expanding in every direction. The necessary route my glance must travel grows longer by the second at a dizzy rate.

Last night was ghastly. In my mind I started out to see the back of my head once more, and as the light with which my gaze traveled commenced its spherical circuit round the universe, the universe itself swelled and swelled, dragging my glance farther and farther from its intended destination. It was something like Achilles and the tortoise, only far, far worse because there was no trick to this.

TODAY I rose at dawn weary of a fruitless quest and not daring to think what faces me tonight; **FOR TONIGHT THE UNIVERSE WILL BE LARGER THAN LAST NIGHT.** My gaze will be farther than ever from the back of my head.

The whole project is a hoax of the first magnitude. I feel frustrated, weary, disillusioned and indignant.

What did innocent readers of Sir Arthur's words ever do to make them deserve the fate into which he has cajoled them by empty promises? 6000 million years at least—**AT LEAST**—ho-bo-ho! Does this Eddington expect to go on perpetrating this cosmic fraud? Good Lord, does he think we are all pseudo-scientists?

I have in the course of my research made allowances for him a number of times, but I am not going to accept, lying down, this final strain on my sanity. This afternoon I assembled at a convenient spot a group of citizens who trusted Sir Arthur Eddington, unconscious that they did so at their peril. Together we will wait on him at the

earliest opportunity armed with lead pipes about the size of small telescopes. Our spirit is united; our intentions, philanthropic; our aim, revenge.

Sir Arthur, we will hunt you down wherever you are, on mountain top or

in observatory. Hiding will be useless. We are prepared to spend 6000 million years — at least — Ho-ho-ho! — in this search. We can afford a long hunt; we need spare no expense. We are subsidized by a rear view mirror company.

CHIP OFF THE OLD BLOCK?

By CARTER T. WAINWRIGHT

HAVE you ever watched the boastful pride exhibited by a new parent at the growth and development of the newborn infant? Every mother and father is convinced that their child is particularly bright and brilliant, bound to be a genius or president of his country some day. They are especially proud when they can point to the activities of their children that show they are a "chip off the old block." If Junior scratches his nose like Daddy does, or his grin is whimsical like his mother's, the parent involved points it out as evidence of the child's inherited action because of its parenthood. Science, however, being cold and unemotional, sometimes goes to great length to point out the real reasons for the child's action and it often makes us blush.

Take the question of left or right handedness. It is often assumed that it is an hereditary characteristic of man that causes him to become right- or left-handed. "It's in the blood" or "just like his old man" are the phrases usually heard in this connection—but science says no!

Here are some of the experiments conducted by psychologists to test this very interesting phenomena. Measurements of right and left anatomical structure such as the width of the right and left wrists, palms, length of forearms, have been recorded and compared. Through the use of specially designed instruments, the measurements have been found to be exceedingly close. The results show that there is no significant difference in the measurements to be found in children.

Handedness has been tested too by recording approximately the total work done with right and left hand for a given period of time. This is done by the use of a work adder, a wheel which as it revolves winds up a small lead weight attached to an instrument, and as the child slashes and flings his arms around, the movement begin to wind the ball up. At the end of a given period of time the child is removed from the apparatus and the height from the starting point of the two weights is measured and compared. The results again indicate that there is no significant difference between the amount of work done by both hands. It varies from day to day and demonstrates again that the child has no

natural preference for either hand.

Finally, the same tendency has been tested by presenting objects after the act of reaching has been established. After the age of 120 days a child will reach for an object to which he has been positively conditioned. Any brightly colored object will do. The experimenter stands directly in front of the child and extends the object slowly at the level of the eyes and on a line between the two hands. When the object is within reach the child will extend the right, or left, or both hands, and this movement is noted. A comparison and analysis of the results show that from the age of 50 days to one year or more there is no steady or uniform handedness.

Why, then, is society right-handed? That question is indeed dependent on many traditional habits. We teach the child to shake hands with his right hand, to wave "bye bye" with his right hand, and we force it to eat with the right hand which is certainly enough to account for handedness.

Historically speaking, the legend of the strong right arm is well established. In primitive times men carried the shield to protect their heart in their left hand and used the right to hurl weapons at the enemy. After that, of course, poets and minstrels sang of the strong right arm and its prowess in battle. Implements such as candle snuffers and scissors were made for right-handed people. The habit has stuck to the point where left-handedness seems unnatural.

One more item must be added. Changing a child from left- to right-handedness or vice versa must be done with great care. It must not be attempted after the child can talk for interfering constantly in his manual habits you may simultaneously disrupt his speaking habits and reduce the child to the level of a six months old infant. To attempt to change a child's handedness is a dangerous procedure and not advisable at any time.

The main question is therefore settled. There is no instinctive left- or right-handedness in a child. It is due neither to physical nor inherited characteristics. It is the result of social conditioning and Pop is just kidding himself.



"We have established contact!"

DR. MACDONOUGH'S Encephalosemanticcommunicator

By LEO A. SCHMIDT

**IT WAS a brain-wave radio set,
but when signals actually came, they
were from a fantastic source indeed!**

PROFESSOR MacDonough settled his lank form on the research couch, carefully inserted his head among the myriad electro-pads, and signaled his assistant to adjust the cardio-respiratory contacts.

"Set all controls as nearly as possible to the same stance as in experience 2516 of yesterday. My notes while in contact and afterward agreed perfectly, but such results certainly need checking. I cannot believe that my communicator is playing tricks on me, and yet . . . intelligent contact with entirely non-human life forms . . . ! Ah, there, she's warming up—no interruptions now for twenty minutes, please."

Gene MacDonough, research director of the Stoneman Neuro-Psychiatric Institute, relaxed and gave his consciousness over to the intricacies of the concept communicator, the top result of his years of experiment and study.

MacDonough was but one of hundreds, of course, who had worked on the general problem of the physical basis of mental activity. The older subjective psychology had seemed to him, even in his college days, to be a mere bantering of half meaningless words. On the other hand, the psychophysics

movement, halting and slow though its early development had been,* was obviously true objective science. The Americans Titchener and Urban, W. Wirth at Leipsig, and William Brown and G. H. Thomson in England, had pioneered on strictly scientific lines, adhering with infinite care to the narrow course of true objectivity amid the vague enticements of hypnotism, telepathy, psychoanalysis, dowsing and the dozen and one other fascinating tangents.

All of these ancillary fields of investigation were significant to men of MacDonough's cast of mind in the cumulative weight of evidence they amassed to indicate the existence of the vast field of phenomena which so stubbornly resisted truly scientific approach.

In the thirties had come the resurgence of interest in psychic phenomena stirred up by the work of Dr. J. B. Rhine at Duke. Dr. Rhine's extra-sensory perception discoveries were, in spite of the tremendous publicity they

* Encyclopaedia Britannica. Psychophysics—established by Gustav Theodore Fechner (1801-1887); Book: *Die Elemente der Psychophysik* (1860)—this book is the beginning not only of psychophysics, but also of experimental psychology itself.

received, sound science.** But even so they were science at the observational and descriptive level and seemed to MacDonough to contribute nothing more fundamental than to verify on a controlled experimental level the observation already quite amply evidenced on a life-experience basis that there were super-normal phenomena.***

"What the scientific mind really must seek," Professor MacDonough had often said, "is the true nature of the mechanics of the thought process itself, that is, the relation between neural structure and mental function. Once this is established, there will be little difficulty in following out the ramifications. Psychical research is at present in the essentially absurd position of attempting investigation of the extra-sensory while it does not yet comprehend the real nature of the sensory."

When Hans Berger announced his electroencephalograph in 1929, and when the electrical engineer, Albert Grass, developed a really flexible model, Dr. MacDonough felt that the first real step had been taken toward objective solution of the neuro-mental relationship. Gratefully acknowledging the splendid start which the Berger and Grass work had given him, MacDonough channeled the tremendous resources of the Stoneman Foundation and his own prodigious zeal to the fur-

ther development of electro-neural reading.

While the publicized progress in the field went into the tangents of lie-detection, the identification of organic psychosis, the prognostication and treatment of dementia praecox and other applied developments, the Stoneman rules happily eschewed publicity and allowed the scientist to pursue his pure investigation.

MACDONOUGH'S first big break away from the announced developments in the field came when he succeeded in "playing back" into the brain the record of brain-wave potentials previously recorded. Applying the method first to his own brain and then to those of his several trusted assistants he found that the effect was the repetition in the mind of the percipient of the same moods that he had himself experienced as agent when the readings were taken.

A second great achievement was made when by a considerable stepping up through radio amplification it was found that the recording of the brain waves of one person could be "played back" into the brain of another, producing in the percipient a mood similar to that of the original agent at the time the record was made.

At this stage all progress seemed for a time to have been stopped. But, with the tremendous patience of the true scientist MacDonough had reconstructed his encephalograph, multiplying the number of contacts many-fold and varying their electro-sensitivity throughout a tremendous range, so that the entire cortical area could be "patterned" in infinite variety. Earlier investigators had discovered the minute electric currents flowing from the primary cortical areas long known to be concerned with the sense-impressions and muscle control, but being unable to detect similar cur-

** Rhine's work does not stand alone in its field as many in America suppose, but has been checked and largely confirmed by the work of S. G. Soal of London University; G. N. Tyrrell and K. H. Thomas of the British Society for Psychic Research and by Dr. Hans Bender of Bonn University.

*** The word "super-normal" as used by scientists in psychic research fields is merely a short equivalent for "not recognized by general scientific opinion," and is free from all implications of "supernatural." Dr. Rhine's term "para-normal" is probably a better term in that it is less likely to be confused with supernatural, and it is suggested that this term be substituted for its older synonym.

rents from the frontal lobes they had labeled them as "silent."

MacDonough reasoned that these areas, far from being "silent" in their performance of the brain's hierarchical integration would be found to be operating electrically like the rest of the brain, but in some voltage or alternating phase which was simply beyond the sensitivity of man's present detecting devices. Thus as time passed and his experiments progressed he found himself "listening in" at ranges far beyond any which had previously been attempted. Though the clarity and strength of the mood-transference had improved from time to time, all attempts to break the vague mood-waves into more specific impressions or even definite messages seemed harked.

And then had come this tantalizing new development.

BEFORE the twenty minutes were up, the scientist signaled his assistant to disconnect. "John, I can't believe it, and yet it's there again! That same signal coming in repeatedly. The general sensation is that of the 'playback,' but it's not my ideas at all which are coming in. Someone . . . or I should say *something* . . . is literally pouring in concepts far stronger than anything we have ever put into the discs ourselves." MacDonough was obviously perplexed to the point of distraction.

"Check every contact again, and then I want you to try it. If you get the same effect as I, before I give you any more details, then we have something mighty queer to explain."

As the indicator bulbs began to glow, the scientist watched his assistant's facial expression. The brows knit, his jaws tensed, perspiration beaded his forehead and lips. His wide-open eyes stared with unseeing fixity. In ten minutes he signaled frantically to be re-

leased from the apparatus.

John Swanson grasped his chief's arm wildly, "My God! I can't believe it! It isn't sensible . . . it can't be . . . and yet it is!

"Chief, the Psyche . . . that's the way I got it . . . the Psyche of Fleedom . . . the king of fleas . . . no, not quite that . . . more a sort of amalgamated intelligence of the fleas . . . seems like a spokesman for the flea government . . . but that's too crazy . . . and yet it *was* that. It kept repeating: 'We are calling human consciousness' . . . not in words of course but sort of a super concept, 'We want to establish contact . . . calling human consciousness . . . contact with mankind . . . calling the human Psyche.'

"Then it seemed to know that it had connected and it came in stronger, 'Don't let go . . . we are establishing contact with humanity . . . this is terribly important . . . this is the Psyche of Fleedom calling the human Psyche . . . hang on to this contact . . . human consciousness, we know you are recipient . . . can you send, can you reply?'

"I couldn't stand it any longer. Surely, Professor, you didn't get anything like that, did you? It's too crazy. Why, it's impossible!"

MacDonough smiled slowly. The exactness with which his assistant's experience checked his own would have been accepted as corroborating evidence of reality in any scientific field. There was no chance of hoax. No one but they knew anything about the delicate structure of the concept mechanism; the very abstruseness of their experiments had put them beyond the comprehension of all but a very few specialists, and not a single word of their efforts had been reported for six months.

"Get it down in writing, John, crazy as it is, put it in words as close to the

concept as possible. Then I'll let you read my notes—you will be astonished."

ON THE next day Professor MacDonough settled himself again on the couch and prepared for another try at the strange game of communication with the would-be-known unknown. The wax platens were detached, the recording needles were allowed to swing in vacuum, and an instantaneous alternator was set into the circuit between the receiving and sending tubes.

As the rheostats moved forward the message from nowhere came in as though it had not ceased from the day before.

"The Psyche of Fleadom trying to establish contact as before with the human Psyche. Are you there, humanity? Intelligent contact being sought with human consciousness. Fleadom wishes to establish contact . . ."

With a feeling which he could have described only as a mixture of extreme gravity with ridiculousness, the man summoned all his courage to concentrate on one thought, "Hello, hello! This is mankind calling! You have established contact. Calling the Psyche . . . calling the Psyche . . ."

Here the feeling of ludicrousness almost overcame him, but he forced himself on, "calling the Psyche of Fleadom . . . calling the intelligent consciousness of the Fleas. Can you hear me, Fleadom? Ready to receive again, Psyche."

"Contact at last; bold it. This is a momentous occasion. Congratulations, mankind. Will you be able to communicate at will in the future? We will always be ready on this psychelo at any time. Be sure to maintain contact, don't lose it. We have been trying to establish contact for thousands of flea generations. This is a momentous occasion. Have you any message for us, any ques-

tions?"

The scientist was bathed in sweat. He felt as if his whole being was contorted by the effort to comprehend. He summoned courage again and concentrated to send. "Mankind sending, mankind is anxious to maintain contact. We wish to learn more of Fleadom. Existence of intelligent Fleadom Psyche is great surprise to mankind. Please send proof of nature of Fleadom consciousness—difficult for mankind to understand."

With experience the signals came in much more clearly, and the scientist found he could control the rate at which the concepts arrived, so that his rapidly flying pencil could record completely the messages as they burgeoned in upon him from the unknown. He heard and wrote:

"Fleadow is the organized totality of all fleas on earth, comprising the combined perpetual accumulation of intelligence of all fleas. We, the Psyche of Fleadow, are authorized by all fleas to represent Fleadow in the Concert of Lower Life Forms. All the lower forms of animal life are now organized in similar pattern. The Concert of Lower Life Forms has been in existence for a length of time corresponding to one hundred million flea generations.*

"We fleas have been in the Concert now for forty million of our generations. The Concert has grown from a few life forms originally organized until now all the forms lower than fleadow, and therefore of course more intelligent, are in the Concert.

"Fleadow has been given the honor of proselyting to the higher animals. We were making a strong effort to bring in the cockroaches as the best representa-

*Since a flea generation, or cycle from birth to maturity, is four or five weeks, we may calculate twelve or thirteen generations per year, and bring this figure of one hundred million flea generations down to seven or eight million years.—Ed.

tive of higher animal life, but we will accept man in their place since you have established a priority of contact. Are you receiving, Psyche of Mankind?"

SHIFTING to the sending stance, MacDonaldough replied, though the sense of the ridiculousness still fought against his attempts at dispassionate analysis: "Gene MacDonaldough, one man, is answering you, Psyche of Fleadom. There is no Psyche of Mankind, I have ~~no~~ authorization to speak for all men, ~~but~~ I wish to remain in communication to learn more of other intelligences seeking contact. I will record all messages faithfully and relay them to other men in due time. Tell me more about yourselves. Who are you? How are you organized? By what means do you communicate with me? What do you want of man?"

This time there was a moment's hesitation before the reply began coming in. "We cannot understand that there is no Psyche of Mankind. Is not human intelligence organized? We feel that your organization may differ in form but that you must still be the analog for our Psyche. We will communicate with you on this assumption for the time being. Please arrange full authority from man to treat with the Lower Life Forms Concert. It is extremely important that *modus concertus* be arranged with man. Lower Life Forms have been impatient with man for many million flea generations. Certain forms have urged destruction of man. Calmer counsels have prevailed until now, feeling man might be made orderly member of Life Forms Concert."

The concepts were coming in so clearly now that the scientist felt almost as though he were a party to a long distance phone conversation. His hurrying pen was getting down the messages in full, and as he replied again he wrote

out his own part in the strange dialogue!

"MacDonaldough is asking more information for mankind. Will you summarize history of your Life Forms Concert, give more specific details regarding method of operations, purpose and so forth. How many forms of life are covered? Mankind is intensely interested as a matter of scientific research. Can you present objective evidence of the truth of your assertions? Man is ready to receive again."

"Answering Man's queries. Lower Life Forms Concert is the modern outgrowth of original Amoeboid Forms Concomitant Survivorships Mutual, which in itself came about through a coincidental inter-sentient mutation fully 200 million flea generations ago. The Amoeboid forms discovered the possibility of more satisfactory survivorship by specialization in foodstuff provinces. After about 20 million flea generations the Amoeboid Central Psyche established contact with a newer and still loosely organized Diatomic Conference. Finding their members in conflict at many points the two organizations immediately made treaties for mutual benefit providing sustenance proration and intergroup reciprocal foodstuff rationing. Where previously there had been conflict and competition there was now entire amity and mutual benefit.

"Since that time the organization of the many forms of life has proceeded very rapidly because the groups already in the Concert have made strenuous efforts to establish contact with other groups. We have found progress down scale to the simpler forms easiest since invariably these groups were in themselves organized and ready to treat with the evergrowing general concert.

"The Volvocinae have come in and negotiations with Euglenia Viridis are well under way, though the Viridis is contemplating joining up with Plant

Forms Symposium rather than with our animal life forms Concert.

"Upwards, the movement has met with less success, and as we have said, it was many millions of flea generations before Fleadom was contacted and taken in. Roughly speaking our Concert now embraces all the Protozoa and all Metazoa through phylum eleven. In phylum twelve we embrace classes one to four solidly. In the last 40,000 flea generations we have made fine headway among the Hexapoda, but progress upward is extremely slow because of intra-group disorganization. If at this time in spite of your extremely low intelligence we can bring in Chordata Craniata, it should be a big step toward moving back through the more intelligent phyla thirteen to eighteen.

"This has been a bare outline of the history and present status of our Life Forms organization. The Psyche does not quite comprehend your request for 'objective evidence of the truth of these representations.' Is it that you wish greater detail, or do you wish us to tell you of the advantages of affiliation, or of our plans for still further expansion? Just what phase of the teleological problem do you have in mind by your request for 'objective evidence of the truth'? We would be glad to repeat any subject matter not already clearly conveyed."

FOR a moment MacDonough was nonplussed. The Psyche of Fleadom could not comprehend the possibility of falsehood! To it, all assertion was truth. Or perhaps only the truth could be asserted. Or was it perhaps merely that direct concept communication prohibited the transference of anything but actual conceptual truth? Was deception purely a function of words and obvert signs, just as misunderstanding seemed

to be? It was a case for the philosophers. In the meantime, the test of "consistency within the fabric" would be the only guarantee of validity.

Again he assumed the sending stance. "The matter of objective evidence is hereby dropped. Will the Psyche say more about the benefits already derived by Concert adherents from their membership? Could mankind expect similar advantages? On what terms would mankind be accepted?" Suddenly the strain was too great, he was forced to signal Swanson for release.

After a few hours rest and liberal dosage of black coffee, MacDonough settled again into the communicator. Immediately the voice from the void was there: "The Psyche of Fleadom proceeds to answer Craniata Mankind's questions.

"Benefit of Concert is survival. Disrupting influence of non-cooperation will not be allowed in case of any form which has been sensibly contacted. Twenty flea generations is maximum time allowed for full adherence after contact. Life forms not thus adhering are immediately eliminated by concerted action. Ask your systematologists to show you gaps in the lower life forms taxonomic chart to prove this point."

Proof? MacDonough suddenly realized that he himself had supplied *that* concept. But so smoothly did the concepts from outside slide into his consciousness that for an instant he had failed to distinguish his own thought process from the inflowing impacts.

"Continuing to answer mankind's questions," the concept-flow continued, "mankind, by adhering would be relieved of concert forms sustenance attack except for minimum treaty-right mutual foodstuff contribution in terms of percentage of born humans. All other mankind would be relieved of all attack

by all forms now in the concert, and would have aid in resisting all non-concert forms up to the point of their bare survivorship.

"Mankind Psyche would fix length of man generation by intelligent appraisal of enjoyment capacities; unit demise may be made voluntary by treaty adjustment of mutual foodstuff percentage. New adhering forms usually select foodstuff contribution units by evolution court until high degree of development is reached, thereafter by lot. Hold it, a minute please. . . ."

After a few seconds interruption the concepts continued. "Sorry to keep you waiting. Just received communication from Lower Life Forms Concert Committee on New Treaty Offerings with final terms for mankind's adherence. Here they are: Mankind's contribution to all associated forms, at mankind's present rate and volume is to be three-seventeenths of one per cent. Time for complete agreement by Mankind extended to fifty flea generations on Mankind's plea of disorganized Psyche.

"After adherence Mankind will be given option of immediate full benefits or graduation of benefits up to one hundred man generations.

"In case mankind in its unintelligence refuses to cooperate, the Concert Coun-

cil on Eradication will withdraw bacteriophage support, and declare extra foodstuff dividend for all concert life forms.

"The Lower Life Forms Concert confidently awaits an early and affirmative action from the Psyche of Mankind.

"No further communication will be necessary until the Psyche of Mankind through its agent human MacDonough shall notify the Concert through the Psyche of Freedom of its full adherence or failure to so adhere."

TWO weeks later a very worried scientist by the name of Gene MacDonough fingered a bulging manila envelope, which he knew contained reports and documents of utmost importance to the human race. The newsboys' shrieks, as he made his way through the tumultuous crowds toward the Pentagon Building, hardly registered in his burdened consciousness. "Berlin Falls!" "Hitler a Suicide!" These were mere details of intra-mankind confusion, and of no real consequence to the problem which he had to present to the War Department, General Staff, Tactical Division, Committee on Suggestions for New Methods, Officer for Public Relations to whom he had finally been referred.

ARMY MEN HOVER IN MIDAIR!

THE Army Air Forces disclosed the establishment of the nation's first military helicopter training school at Freeman Field in Southwestern Indiana.

Colonel E. T. Rundquist, commanding officer of the field, which also is used as an advanced two-engine pilot training school, said personnel of the new helicopter section were officer-instructors rated as pilots, and field mechanics, who are enlisted men.

The training in the use of helicopters is given at the field and at the Sikorsky aviation plant, Bridgeport, Conn.

Colonel Rundquist also announced that two Freeman Field officers recently "made aviation history" when they flew two R4-B type helicopters 725 miles on the longest formation flight

ever made by rotary-type planes in this country.

The officers, Major John J. Sanduski, of Omaha, Neb., director of the helicopter training program, and Lieutenant Norbert T. Guttenberger, of Chicago, an instructor, flew from Bridgeport to Freeman Field.


Their time was not revealed, but Colonel Rundquist said that "on the trip they set new cross-country helicopter speed records even though they encountered strong head winds and crossed the Allegheny Mountains in Pennsylvania."

Colonel Rundquist said the Southwest Asia headquarters of American forces at Kandy, Ceylon, announced recently that helicopters were used in the air-borne invasion of Burma by American units.


—Reginald Q. Pettibone.

SCIENTIFIC


THE ICE SHEET DROVE
EARLY MAN INTO MEXICO
AND TO SOUTH AMERICA



MINGLED BONES OF MAN AND
THE SLOTH SHOW MAN WAS IN
AMERICA DURING ICE AGE



THE SIOUX, REALLY THE DA-
COTAS, WERE GIVEN THEIR
SLANDEROUS NAME BY ENEMIES



PAWNEES TORTURED TO
VENUS. DID THEY GET
RITES FROM THE STARS?



ICE PUSHED THEM WEST,
TRIBE AGAINST TRIBE,
BACK AGAINST THE SEA

MYSTERIES

A SCIENTIFIC JIG-SAW PUZZLE

By L. TAYLOR HANSEN

The most bewildering puzzle of the American races is the disposition of their languages over the North Americas

IF THE Uto-Artecan Block of Languages is a scientific jig-saw puzzle, the linguistic map above that block is equally amazing. In some ways they are the very antithesis of one another. As the Mexican Block is composed of strangely different physical types talking related tongues, so the northern group is composed of relatively similar types talking widely-separated tongues. And as the Southern Block is composed of islanded physical types surrounded by another physical type, so the Northern Block is composed of islanded-tongues surrounded by a dissimilar language-stock.

Yet, the various cultures of the Americas are so closely connected that we must seek and compare again and again for the elusive key which, when discovered, should go far toward pushing back the portals of history from twenty to fifty thousand years.

That man was in the Americas during the times of the Great Northern Ice is not to be doubted. His bones have been found in South America, mingled with those of the Great Extinct Ground Sloth, and in North America the skeletons of the Great Extinct Bison* have been found in a circle with their tail bones missing. To the Indian this can mean only one thing—the most obvious explanation—that the animals were skinned. And this in spite of the fact that in Europe at this time, Neanderthal Man watched the approach of the mile-high ice as one would look upon the doom of a planet. If the skulls found here had only been of the peculiar skull-type that Neanderthal presented, scientists would have been more prepared to believe in their antiquity. However, the skulls have all been modern—as modern in type as the skull of Cro-Magnon or as the present Amerind himself.

Dr. P. E. Goddard of the Amer. Museum of Nat. Hist., N. Y., writing in the American Anthropologist, calls attention to another find—that of an extinct bison lying in undisturbed Pleistocene formations with a worked spear-head of flint intermingled with its skeleton, and declares that linguistic evidence has long shown

that the recent peopling of America was improbable. At just what particular part of the Great Ice Age this old Texas bison became extinct is not at present known, but, Dr. Goddard continues, in order to have man come after the Ice Age, and yet raise the lost American Civilizations, as well as speak all of the present Amerind tongues, the tribes of one hundred separate language stocks, all differentiated in Asia, would have to bury across the Aleutians at the break up of the ice, and without waiting to populate North America, would have to rush across Mexico and the Isthmus to South America and there get busy exterminating the Ground Sloth, cultivating maize and a hundred other Amerind plants before drifting again back north. Such a conception is, he says, utterly "fantastic for the time allowed has been much too short."

He substitutes the theory that during the Pre-glacial, man came over with the other animals of Old World origin—the camel, horse, elephant, etc. With the advance of the ice, he retreated before the great white sheet into Mexico and probably into South America where, because of the crush for space, he cultivated food plants and began his great civilizations. Then, only as the ice retreated, and the animals followed the pendulum of their food zones, did man migrate again into the north of North America. The date when these counter-migrations began, he points out, should be determined by the linguistic difference within the stock. Thus the Athapascan migrations took place before the remote members such as the Canadian Chipewyans and the Arizona Navaho were separate peoples.

With the possible exception of the Athapascans, this theory of Dr. Goddard is the most plausible offered by any scientist as a key to the Amerind Puzzle. The Athapascans may well have been late immigrants from Asia whose entrance into the Americas dates back only some two thousand years.

OTHER scientists, determined to bring man over from Asia within the span of time allowed after the final retreat of the ice, sit down

*Bison Tayloria. See Ind. of U. S.

and stare at the linguistic map of North America in dismay. The first great fact to refute this simple theory is that the Eskimo tongue is essentially not Pacific, but Atlantic, and finds its closest ally in the Algonkin Block. Upon these two very ancient tongues as a wash of background, therefore, one must figure his migrating spearheads of invading languages.

The second great fact to refute this late Asian migration is that hundreds of tiny groups are islanded along the Pacific Coast. Small tongues are always buried back to the borderlines opposite the point of invasion. In other words, the wreck of the previous population is swept away from the invasion point. This would not mean a steady sweep in from the North West, as much as it would mean many sharp and repeated thrusts from the Southeast, or up the Mississippi River and thence toward the west, pushing tribe against tribe until one battered remnant after another reached a point beyond which there was no retreat.

As for the order of their coming, that is largely guesswork, and fitting together pieces of the Jig-Saw. Islanded thrusts always precede those which surround them. As for the Kiowa tongue, which like the Keresian, has long remained a mystery, the linguists are now inclined to regard it as a link. Perhaps, unlike the Pawnee whose linking of three tribal language stocks (Siouan, Iroquoian and Caddoan)* may explain much, the Kiowa linking only seems to create a deeper mystery. For how can a language be a link from the Athapaskan-Apache to the Shoshone which is Uto-Aztecan? How indeed, unless they borrowed words from their wild Apache neighbors? Yet the Kiowa themselves say that they once lived in the "Black Hills" of Dakota and left their parent tribe because of a quarrel. Does this mean that the Uto-Aztecs once held that territory before the advent of the Caddoan and the Sioux?

The Pawnee, on the other hand, who seems to be a link between the Iroquois and the Caddoan, oblige us with a far more reasonable legend. They admit that they were once great migrators and lived near the Iroquois for whom they had a deep regard, near the mouth of the Mississippi. They also claim to have named the Ohio, a claim, incidentally, which the Iroquois also make.

Now into this composite picture which legends are slowly helping to clear somewhat, come the Sioux. The correct name for the Sioux Nation is Dakota, but with typical Indian grim humor, they will not deny that they are the "Sioux"—a slanderous name given by an enemy tribe.

This proud nation, the Dakota, told the first whites that they were a grain-raising people living in Virginia. However, when the White Man brought the horse into the Americas, the Dakotas saw in this animal the promise of a more abundant life. They packed their last harvest



Compiled by the author from the work of C. Wissler.

AUTHOR'S NOTE: Hundreds of small groups which are islanded and apparently unrelated, but upon better study may be found to be distantly linked to other groups.

upon their new animal-servants and migrated to the great western plains of the Black Hills where they could find an easy living following the herds of buffalo, and where they gave their euphonious name to two states.

Thus the picture is complete, with the exception of the Muskogean, who should have arrived last, judging by the map, and whose legends upon that subject are the most enlightening of all.

Could it be that these people of the forest who presented such a dark portrait of superstitious ignorance to the newly-arrived white settler, were in reality the scattered splinters from the wreck of perhaps not one but several ancient civilizations?

EXPRESSING this opinion one night before a group of scientists I had one astronomer turn upon me with scorn, holding up for ridicule the fact that the Pawnee Indians say that they were organized by the Evening Star.

"Pure superstition," he sneered. "What could that tribe of savages know about Venus—merely that it glittered brightly after the sun had gone down!"

And then warming up to his subject, he continued: "Besides, I remember reading in an early

(Concluded on page 209)

*Pawnee is Caddoan.

MEET *the* AUTHORS

By A. R. STEBER

I WAS born in a log cabin on the frozen steppes of Siberia, July 4th, 1867. This date was later to be the deciding factor in my resolve to become an American citizen. My youth was spent largely in the pursuit of wolves, not because I loved the beasts, but because their fur was necessary to provide me with warm trousers against the fierce Arctic winds. When I was eighteen, I entered the service of the czar as a common soldier. For many years I fought Japanese, and seemed always on the losing side. Thus, in 1910 I deserted and escaped to France, where I was when the first world war broke out. I became a secret service agent and was instrumental in the final coup that led to the Russian revolution. After the war I came to America and became an American citizen. However, I returned to find that the brave soldiers whom I had come to know and love in France were now forced to peddle apples on street corners because of a lack of jobs. For several years I felt there was something wrong. Once more I applied for the secret service, and began the most hectic series of adventures of my career. I believe I was one of the first to realize that Germany was preparing for another war, and spent many years collecting evidence of German fifth column activities in many countries. But I was revealed to their agents by an unfortunate murder which was later proved to be self-defense, and was framed by the Gestapo while on duty in Holland. I was ordered from the country and became useless as a secret agent. Almost immediately I joined a salmon canning company's technical research staff and became part of an expedition into the Pacific in an effort to discover how far the salmon went before they came back to their Columbia river birthplaces. I tracked the salmon to his deepest lair only to find that my explorations must end due to Japanese fishing fleet activities in American waters. Now my youthful hatred of the Japs flared up, and I deserted the expedition in the Aleutians, made my way to Japan, and sought to tie their ambitions toward world conquest to that of the Germans. I was successful, but too late. I uncovered the whole dastardly plot the day after Pearl Harbor. My only salvation then was to don the disguise of a German military attache, and in this manner I

managed to escape from the country. I made my way to Singapore just in time to get in on the defense of that spongy fortress, and saved my life only by a fortunate friendship with the owner of a native sampan. After eighty days at sea, dodging Jap planes, we drifted ashore on a Pacific isle, where we remained until rescued by an Australian cruiser. The cruiser was promptly sunk in a naval engagement off Guadalcanal. By this time I had become resigned to ending all my ventures in salt water, and offered my services to the Australian government as an experimenter into the possibility of making explosives from common sea water. This offer was rejected, and I made my way back to the States with the help of a notice from my draft board to report for induction. I was rejected and placed in 4-F (saline liver) and took a temporary position on a newspaper. However, I was unable to withstand the rigors of a winter on a street corner, and once again became a free-lance of espionage. I am convinced that Germany is planning a third conflict, and that if she is not revealed to the whole world, her rocket science may prove to be the weapon that may accomplish what she has twice failed to do. Thus, I have dedicated the remaining years of my middle-age to uncovering the under-



A. R. STEBER

ground plans of the Germans. I hope that I may not be too late on this third try. As for my fiction in this magazine, my first stories (written during those eighty days adrift in the sampan) have been so well received that I have been persuaded to write one more—this one while enjoying an occasional free moment or two in between contacts with German underground agents, who have accepted me as one of them. They do not suspect me as yet, but I have had to kill several of them and blame it onto French and Yugoslavian guerrillas. The manuscript itself was smuggled out in the mail pouch of a German diplomat, which is perfectly safe, as you would understand if you knew the diplomat! One phase of my life I have thus far neglected to mention dates from February 14, 1938, at which time I became the editor of *Amazing Stories*, in which position I have been ever since, and which accounts for all of the foregoing fiction—for which I hope I will be forgiven!

—A. R. Steber

DISCUSSIONS



AMAZEIN STORIES will publish in each issue a selection of letters from readers. Everybody is welcome to contribute. Bouquets and brickbats will have an equal chance. Inter-reader correspondence and controversy will be encouraged through this department. Get in with the gang and have your say.

THEY GOT WHAT THEY WANTED

Sirs:

The reasons that I like and dislike your magazine are those that follows. Please keep in mind that they are in my opinion the truth.

The main reason I like your magazine is that it pleases its readers. The readers wanted a longer letter column, they got it. The readers wanted some name artists, they received them. The readers wanted a contest, they were given this one, and others. They wanted name artists, authors, and better covers, they got them. The readers wanted old issues of AMAZEIN and you made a back issue list.

There is only one gripe. Half of the general content of an average issue is not up to par. You generally have seven stories an issue. Three or four are good, the rest awful. But there is generally always one good one! Also thinner issues made monthly.

Austin Hamel
(Address not given)

Just as soon as the paper situation lifts, we will give you monthlies, and thicker issues!—Ed.

DOWN WITH ADULTS!

Sirs:

Looking at the "Discussions" of the May issue I find not less than three letters by MEN under sixteen. I could just hear the older fans writhing and groaning with indignation. Letters, I imagined, would come pouring in from all over the country saying, "Why don't the brats go back to their comic books and western thrillers? This is strictly an adults mag. Don't print their insane letters." PFUI! Who, and whose children will do many of the things described in your magazine and others like them. I have seen letters from the so-called adults that smack of "Mortons Home for Morons."

Now I will tell you the reason for my little blow-off. I too am a mere stripling, just fifteen and I have been reading S. F. ever since I first bought a weird looking mag with a story called "Wanted, Seven Fearless Engineers." I believe it was called AMAZEIN STORIES. Could you please tell me which year that was as I have forgotten?

The May issue was not the worst I've read but it was not the best. I rank the stories as follows, "I, Rocket" first; "The Constant Drip" second; "Free Lance" third; and in order of merit "Midas, . . ." "Murder in Space," and "The Horror" last because it was a horror of a story. "Murder in

Space" left me flat for some reason, maybe it was all the law.

The art was fair except for page 26, that stank. I'm glad to see that the covers are getting away from nudes, etc., and are using space scenes more. Dept. of Improvements:

I can see your point in not trimming the edges but do you have to cut do yourself in making them messy. The ones on my copy were all different lengths, no two the same.

Please have one real good heavy science story. Some won't like it but those of us who read S. F. before 1941 will enjoy it very much.

Yours for more and better S. F.

Maurice Brent Haslam

We certainly took a lacing, this time! But we'll try to give you exactly what you want in the next issue!—Ed.

OPEN LETTER TO LELAND HICKLING

Sirs:

Re: Scientific Mysteries:

Your comment in the Discussions Page of A. S. was logical and shows knowledge of the subject. However, I do want to correct a misunderstanding. You seem to be under the impression that I denied the well known historical fact that the Pharaohs "Two Lands" were Upper and Lower Egypt. If you will re-read the article, I believe that you will find I was not discussing the earthly rulers of Historical Egypt, but rather the god Amen or Ammon Ra.

It is possible that originally the duality was older than either Upper or Lower Egypt as such. This might be one explanation for the strong duality (see Article on The Twins, and coming articles) on this side of the Atlantic, as well as the powerful American traditions of this same god. That he was said to have been seated on the "Throne of the Two Lands" stuff does not underwrite his Egyptian origin. Traditionally he was a western god and it is still possible, perhaps not probable, but possible, that one of the lands which he once ruled in life was located on the western side of the Atlantic. Or, accepting the usual hypothesis that such a deified figure was once a great living leader—whose leader was he?

With your knowledge of Egypt, you will be much interested in some of the articles to come—especially those which deal with the Karb or Carib tribes of the Atlantic coastline. The curiosity and interest which you, Bill Stoy, G. H. By-

land, Harold Newman, Sgt. Dyers from the South Seas and others have expressed is, in the last analysis, the driving power of all science, for at heart the scientist is an explorer into the unknown. If you once catch a vision of the antiquity of The Americans you may become enraptured as the rest of Amerind investigators have, for the bait here is a seeming antiquity which shadows back to times which make Egypt quite modern by comparison.

Re Old Copies—To soldier Dyers from his foxhole: Flattering as your desire may be to receive all back number of my articles, I could not possibly grant it. Perhaps in these columns you will find people who have the old copies and will be glad to sell them. I am sure the editor will be glad to furnish you with the information as to what numbers held various articles before they started running steadily in June 1942.

L. Taylor Hansen

Perhaps Mr. Hickling will have something further to say on this subject?—En.

DEFENDING TIME TRAVEL

Sirs:

I am merely writing this letter to you to express my strong resentment at Mr. Oesterreicher's letter where he says, and I quote "time travel is impossible" to state such a thing proves that the author of the letter is not very bright, for if he would read a few books on relativity and the fourth-dimension I am sure that he would change his warped attitudes on the matter.

It is well known that to travel in time you would have to go to certain stars or other planets and thus by the time light reaches the star you would, with powerful telescopes, be able to see either the past or the future.

To make it clearer; a person on proxima Centauri would today probably witness the battle of Waterloo. But if he would approach the earth; the waves of light rays would be shorter and he would then see 1944. This is one of the many examples of time-travel.

If Mr. Oesterreicher would read a few scientific books instead of science-fiction magazines he will see that space or time travel is not at all impossible but on the contrary very plausible.

R. Fast, D.S.F., D.D.F., F.R.S.

Larchmont Acres

Larchmont, N. Y.

We don't believe anyone will argue with your concept of a way to travel in time.—En.

WANTS LEMURIA STORIES

Sirs:

I have read AMAZING STORIES for the past two years now and like it very much. About your December issue, there were only two stories worth anything at all. The best one I have read in a long time was "Truk Island" by Berkeley Livingston. Then comes "The Whips of Doom" by Helmar Lewis. You should gobble up all their manuscripts you can.

How about some more stories about Lemuria and Lemurians? In your other mag, *Fantastic Ad-*



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ventures, you have stories like "The Return of Jongor" by Robert M. Williams. We want more like those in A.S. E. R. Burroughs should be included too. Why don't you get wise to yourselves and publish good stories for a change? If I can offer a suggestion why not take a book by Burroughs like "The Moon Maid" and make a serial out of it. I think the other readers would like it immensely.

Years till you print a few good stories for a change. Your cover for this issue "stunk" figuratively, of course. Get wise will you?"

Chas. B. Kennell
 165 W. 32nd St.
 New York 24, N. Y.

We shall certainly continue to use the authors you mention. As for Lemuria, this issue and the issues to follow should certainly satisfy you! If by "good stories" you mean Burroughs, of course—but Burroughs is unavailable now, and we don't use reprints. How do you mean the cover "stunk figuratively"?—Ed.

SOME COMMENTS

Sirs:

I have been reading AS for five years now, and I think it is about time I came out of my shell and let you know what I think of the old mag. First, the covers are finer than any other magazine has to offer, with the best (I think) being the one by R. G. Jones on the Nov '42 issue. Although I do not like Brady, Milburn and McCauley, the interior illustrations are always good with Finlay and Magarian leading the pack.

Second, the stories in my opinion are not as good as the ones of three or four years ago, with the exception of the classics, "The New Adam," "Empire of Jegga," and "Warrior of the Dawn" (Where's that sequel?)

My favorite authors are Wilcox, Bond, and Reed, with the rest being better than average.

Third, The Observatory is always interesting and the longer the better. Ditto Discussions.

The Scientific articles, Vignettes and Scientific Mysteries are like blood to the book, keep 'em. All in all, it's a pretty swell mag.

If this letter is printed (I hope), I would like to add that I have means of securing Merritt's "Moon Pool." I know there are lots of new fans who are unable to obtain this, the greatest fantasy of them all in my opinion.

I would like to obtain any of Merritt's works, and if anyone can help me out on this I would certainly appreciate it.

James Ellis
 604 10th St., S.W.
 Washington 4, D. C.

Mr. Browne hasn't finished his sequel yet, but we have hopes. As for Merritt's works, perhaps some of our readers can help you.—Ed.

HOW RIGHT YOU ARE!

Sirs:

I just received today the December issue of "Amazing Stories."

Thoughts of reader, "Well what's so unusual about that, I've got one too. I'll bet this is going to be a dull letter. Oh, well, let's see what's next."

This letter is going to concern itself almost entirely with the story about the back cover.

"Well, I certainly can't be expected to remember what was on the back cover four months ago. Who does he think I am, a Quiz kid. I hope he (or is it a she) says what it was."

The author says it will be a train running on one track held erect by the use of a gyro wheel.

"Yah, I think I remember it now. What a queer looking train."

The author overlooked one important detail.

"He sounds just like Doctor Ordway on 'Crime Doctor.'"

This detail is: if you point the axis of a gyro wheel at the sun, it will continue to point at the sun, irrespective of the motion of the earth. In other words, if the top of the train is pointing at the sun at noon, the top of the train will still be pointing at the sun when it sets.

"Goodness, what a mouthful, I wonder if that guy knows what he is saying."

The only other thing I want to say is about the front cover. There were a lot of differences between the story and the cover. In the story the people (♂) are nude and they had very white skin. The person on the cover was not either of the two. Also, how did she keep her lipstick in such good condition for four months?

All in all, I thought the December issue wasn't too bad, but I've seen better.

Marvin Maxwell
3325, Ga. Ave., N. W.
Washington 10, D. C.

Marvin Maxwell
3325, Ga. Ave., N. W.
Washington 10, D. C.

Of course the gyroscope would act that way! But would not be fixed in its mounting. What about the gyro that holds ocean liners steady? Why don't it turn the ship over at evening? Consideration of that should answer your question. As for the cover, the recent trouble Equibre had with the Post Office ought to answer your question there.—En

ANALYSIS OF 1944

Sims:

With due thought and study, I have come to the following conclusions. 1944 was a bad year for AS—just about the worst yet. But that can be explained by the war (I hope) so I am looking for great things after V-day. And now to the work at hand, namely the dissection of AMAR-200-25, follows:

Front Centre:

1st. May. the best cover since March 1943.
2nd. Tie between January and March. Both very good.

Back Covers:

1st. January. Superb!
Inside Pics.:
1st. Virgil Finlay, Page 105, March issue.
2nd. Hadden. Page 43, May.

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LEMURIAN FELLOWSHIP

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3rd. Hadden, Page 9, May

Stories (for 1944):

1st. "Star Base X," by Robert Moore Williams.

A really great story. It was very touching in parts, and the whole thing was very well worked out. "Battle Before Dawn" by Robert Moore Williams. This ties with "Star Base X" for first place. One of the three best short stories that I have read, and the best you have published. Magnificent!

2nd. "Murder in Space," by David V. Reed. Well developed, but it could not compare with "Empire of Jegg."

3rd. "Warburton's Invention," by Russell Story. Very good in parts, but bad in others. Would like to have seen what Williams could have done with this.

4th. "I, Rocket," by Ray Bradbury. Very original.

5th. "A Most Ingenious Paradox," by George Tashman. Excellent, more of Tashman please.

6th. "Intruders from the Stars," by Ross Rocklynne. A very good story, with a very bad ending.

7th. "The Mad Robot," by William P. McGovern.

8th. "It's A Small World," by Robert Bloch.

9th. "Undersea Guardians," by Ray Bradbury. Beautifully written, but the idea . . . Hummmmmmm.

10. "Magnetic Miss Meteor," by Don Wilcox. Did anyone else notice that the Finlay pic for this was almost exactly like one he drew for "The Spot of Life," in FFM? The background is identical.

I await "I Remember Lemuria" with interest.

Ken Harmon

627 Channing Ave.

Palo Alto, Calif.

Your breakdown of our 1944 issues is appreciated and interesting. Thanks much.—En.

YOUNG READER LETS OFF STEAM

Sirs:

I am a comparatively new reader of A. S. but I also have opinions. I think that "Truk Island" was the best story in the December issue. I think the war backgrounds idea is a swell thing.

Now for the "Discussions" column. I think Mr. Waible of Portland, Ore., fought to get a contract for his storyette about Elmer Fitch. As for Mr. Warren Rayle of Findlay, Ohio, I think it is just terrible that he has the impression that most of your fans are between the ages of 13 and 16. Maybe he is right; I doubt it. But what if he is? I am only 15 but I am a human being and have a mind of my own. I would like to see the story he is writing. Thanks for letting me let off some steam.

Tom McKnight

5125 Live Oak Street

Dallas, Texas

We have readers from 9 to 104! Thanks for letting off steam for us!—En.

SCIENTIFIC MYSTERIES

(Concluded from page 198)

history that this was the very tribe which cut off the beads of its captives and used them for a sort of football!"

(Not a pretty picture, and without doubt true. Yet it is a curiously ancient ritual which was repeated after a war by some of the priests of one of the best Mayan civilizations.)*

My revenge came with almost dramatic suddenness when I was browsing the next Sunday afternoon in the Indian section of the Field Museum of Natural History in Chicago. A curious map with tiny crosses made upon an old yellowed bit of tanned elk skin about 15 by 22 inches caught my eye. After studying it with growing bewilderment, I hurried out and dragged my skeptical astronomer back with me.

"Why this is an astronomical map of the heavens!"

"Must be an error," I murmured, nodding to the card which identified it as I read aloud: "Sky-map taken from a Pawnee Medicine Bundle, over three hundred years old."

But all he heard was the last phrase.

"Certainly it is over three hundred years old. No modern observer ever saw Lambda Tauri as bright as it is marked here."

"It is a variable," I answered. "It could have been."*

"Yes, I know."

"Or it may have been Venus. She has passed there on former transits."

He nodded and tugged at his collar as if it was too tight for him.

"But the most astounding thing is those double stars!" he gasped, "not only Mizar and Alcor but also the double between Lyra and Corona Borealis."

"How about the seasonal shift?"

"Yes, they recognized that too..."

And I guided him out of the museum like one who walked in a trance, as he mumbled: "With-out optics, how could... and yet, on the other hand, how are such things to be explained?"

"You are beginning to talk like an anthropologist," I answered sweetly. "You have glimpsed our Jig-Saw Puzzle."

REFERENCES

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*Bancroft Vol. V.

*A possible explanation for a variable is that it has a complicated system of planets going around at various rates, the multiple sizes and rates of these bodies causing the light fluctuations.



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THE LANGUAGE OF LEMURIA

(Concluded from page 71)

X—Conflict (crossed force lines)

T—Why

Z—Zero (a quantity of energy of T neutralized by an equal quantity of D)

Some "English" Lemurian Words

ABSENT—Animal be sent (one was sent, therefore is not here)

ADDER—A der (the animal is a der, or deadly)

ARREST—Animal stops to rest (the ar syllable means is dangerously stopped)

BEGET—To cause to exist (command to generate the energy of integrance)

BAD—Be a de (to be a destructive force)

BARD—Bar de (one who allays depressing de force, who overjoys us, decreases depression)

BIG—Be I generate (in the act of generation, as pregnant)

BILK—Be ill kinetic (to run away from ill, to dodge—K for movement)

DARK—Detrimental horrible movement (harrowing things we are apt to see "in the dark")

DECEASE—Stopped by de (disintegrated to the point of ceasing to be—death)

DEVIATE—De vital ste (de has eaten the vital force, implication being the thing goes astray because of destructive force)

DEVIL—De vile (to be vile with de; completely destructive)

DROP—De ro power (disintegrance governs power, thus it becomes less, falls)

LADY—Lay de (alloy depression; complimentary term)

MAD—Man a de (one who may de, be apt to destroy)

MEAN—Me animal (animal conscious only of self)

MORBID—More be I de (I don't want to be any more, I want to die)

NEE—Child energy (charm)

NEUTRAL—Ne you te ral (attracted by the charm of both parties)

OBSCENE—Orifice see charm (orifice meant source of life, thus the meaning is evident)

PACT—Power act (an empowered act)

PEAL—Power all (power and all combine to give a loud sound)

PRISON—Price on (to hold for ransom)

QUIT—Quest you I te (get someone else to do good)

VAN—Vital animal (the leader)

ZEAL—Zero all (foolish ardor—to zeal)

Mr. Shaver and your editor will be deeply indebted to any reader who may undertake to compile a dictionary in any language of Lemurian words secured by use of the alphabet and root words. Due credit will be given such collaborators. Address communications to this magazine.

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STORIES of the STARS

By HENRY GADE

Spica

The light of Spica, in the constellation Virgo, is so bright that our own sun would appear like a mere spark in a furnace

(See back cover)

YOU can find Spica, in the constellation Virgo, very easily. It is a 1.5 magnitude star standing virtually alone in the sign of Libra, 10° south of the celestial equator. It is easily recognized as the southern apex of a nearly equilateral triangle which it forms with Denebola to the northwest and Arcturus to the northeast.

The poetic legend surrounding Virgo recognizes her as Astraea, the goddess of justice, who, last of the old divinities, left the Earth at the close of the Golden Age.

She is also recognized as the Egyptian Isis.

Spica is two hundred and four light years away from us, and is eleven hundred and twenty times as bright as our sun. This is not one of the brightest stars in the universe, but Spica has a singularly glaring light of high actinic power. Our sun, in comparison, is a mere flashlight bulb compared to an arc lamp, or a lightning bug to a flashlight.

If Spica has any attendant planets, they are located at a tremendous distance from her. She has both tremendous heat and size. However, assuming that such worlds do exist around Spica, it is logical to assume that those having life on them would be located as much as a light year away from her.

On the back cover of this magazine you will see Artist Frank R. Paul's concept of what life might be like on such a planet. This concept is purely imaginary, but it is based on certain facts which we know from observation of Spica.

First, its extreme brilliance. Inasmuch as this giant star would give off radioactive rays in great quantity, we could expect the inhabitants to shun the daylight to a great extent, perhaps even living for the most part underground.

The planet itself would be largely desert, its soil seared and blasted by the brilliant sun's rays that heat mercilessly down upon it. In this desert we might find huge cactus growths with a life span much like the giant trees of Earth's California. Assuming that the seasons of this planet are very long, or perhaps even unchanging, due to an almost perpendicular axis, such vegetation would be natural, having the ability to withstand great heat and great cold, and requiring little moisture. Because of a very slow rotation on its axis, this planet has very long days and nights—days in which the temperature would attain bright comparable only to the hottest desert areas of Earth; and cold comparable to a bitter wintry night after sundown.

Perhaps we would find that the inhabitants had hit on the clever idea of hollowing out these cactus plants and converting them into dwelling places which would afford protection from the daytime heat, and also a source of food and nourishment and drinking water, just as does the barrel cactus of the Southwest.

What kind of people would they be? Perhaps because of its extreme rigor of environment, the insect world alone might win a fight against death here. We might find these deserts and dry mountains inhabited only by insects, some of them ferocious and another reason for the "people" we have pictured as dwelling inside these cacti to select them as living places—protection being afforded by the spiny armor of their prickly outer skins.

Our "people" might be intelligent moths, who can fly about at night in the intense cold that keeps the insect of the ground inert in his wafters, and who would possess the delicacy necessary to burrow into the cactus growths, fashion an opening, and able to sip of the moisture of the cactus and the pulp of its inside for food. This savage world would have no abundance of food, and as little as an ounce might suffice to maintain the moth people.

These moths, having perhaps a life span of only a few months, would not be long-lived. Perhaps they would not live much longer than the cactus that forms their abode. They would know nothing of civilized living, or cities, but might be intelligent enough to utilize the "spines" of the cactus as individual weapons; weapons which might prove very potent and deadly indeed, when dipped into the poison of the cactus-flower's pollen.

Artist Paul has pictured them as moths, with black bodies and four tentacle legs, with tiny tendrils that serve as arms and hands. He has armed them with thorns from the cactus, and he has shown a visitor from Earth being cautiously received by the naturally fearful moths, who are creatures of the night, and who regard all crawling things of the surface as enemies.

We see that they are approximately ten feet tall, from the tips of their upward-thrusting wings to their trailing leg appendages. They could exist, theory tells us—and who knows but what some day we will see creatures like this?



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STORIES OF THE STARS . . . SPICA

Life on worlds around Spica in the constellation Virgo must be specially equipped to withstand the glaring light of a sun 1,120 times as bright as our sun. (See page 208)

VIRGO

